

Annual Environmental Report for Intel Ireland Ltd.

March 31

2013

This Annual Environmental Report was generated using excel template documents provided by the Environmental Protection Agency. The report provides summary information on key environmental emissions and management practices associated with Intel Ireland Ltd's Integrated Pollution Prevention Control Licence P0207.

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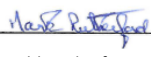
Facility Information Summary	
AER Reporting Year	2013
Licence Register Number	P0207-03 Please note current licence P0207-04 issued Dec 2013
Name of site	Intel Ireland
Site Location	Collinstown Industrial Park, Leixlip, County Kildare, Ireland
NACE Code	2611
Class/Classes of Activity	Principal Activity: 13.2 The Manufacture of integrated circuits and printed circuit boards. Related Activities: 2.1 The operation of combustion installations with a rated thermal input equal to or greater than 50MW. 12.2.1 The surface treatment of products using organic solvents, in particular for coating, cleaning, with a consumption capacity of more than 200 tonnes per year.
National Grid Reference (6E, 6 N)	298310E, 236940N

A description of the activities/processes at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year **and an overview of compliance with your licence listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.**

In 2013, Intel Ireland consisted of one operational manufacturing facility on site Fab 24 (Fab 24 and Fab 24-2). Fab 24 manufactures single and multi-core microprocessors. There are two manufacturing processes, 90nm which is in production since 2004 and 65nm which started in 2006. Fab 24 and Fab 24-2 ceased production late 2013 to allow for conversion works to enable an upgrade for a new technology. Details of incidents and complaints can be found on our incident reporting sheet.

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

Signature  Environmental Health and Safety Manager (or nominated, suitably qualified and experienced deputy)	Date 31/03/2014
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AIR-summary template	Lic No: P0207-03	Year: 2013
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Answer all questions and complete all tables where relevant

- 1 Does your site have licensed air emissions? If yes please complete table A1 and A2 below for the current reporting year and answer further questions. If **you do not have** licenced emissions and **do not complete a solvent management plan** (table A4 and A5) you do not need to complete the tables

Additional information	
Yes	

Periodic/Non-Continuous Monitoring

- 2 Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of Table A1 below
- 3 Was all monitoring carried out in accordance with EPA guidance [Basic air monitoring](#) note AG2 and using the basic air monitoring checklist? [checklist](#) [AGN2](#)

No	
Yes	

Table A1: Licensed Mass Emissions/Ambient data-periodic monitoring (non-continuous)

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision thereof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments -reason for change in % mass load from previous year if applicable
A220/A247	Ammonia (NH3)	Annually	30	100 % of values < ELV	0.12	mg/Nm3	yes	EN 14791:2005	<21	
A220/A247	Volumetric flow	Annually	20,400	100 % of values < ELV	9,972	Nm3/hour	yes	EN 13284-1:2002		
A01/A03/A04/A05/A06	Nitrogen oxides (NOx/NO2)	Annually	180	100 % of values < ELV	115	mg/Nm3	yes	EN 14792:2005	11336.1	Average of Emission point results reported. Mass emission includes boilers and RCTOs
A101/A102/A103	Nitrogen oxides (NOx/NO2)	Annually	170	100 % of values < ELV	93	mg/Nm3	yes	EN 14792:2005		
A201/A202/A203/A204/A205/A248/A253	Nitrogen oxides (NOx/NO2)	Annually	150	100 % of values < ELV	107	mg/Nm3	yes	EN 14792:2005		
A01/A03/A04/A05/A06	Carbon monoxide (CO)	Annually	100	100 % of values < ELV	3	mg/Nm3	yes	EN 15058:2004	4223.4	Average of Emission point results reported. Mass emission includes boilers and RCTOs
A101/A102/A103	Carbon monoxide (CO)	Annually	100	100 % of values < ELV	2	mg/Nm3	yes	EN 15058:2004		

Air Summary Template

AIR-summary template			Lic No:		P0207-03		Year		2013	
A201/A202/A203/A204/A205/A248/A253	Carbon monoxide (CO)	Annually	100	100 % of values < ELV	2	mg/Nm3	yes	EN 15058:2004		
A218	Volumetric flow	Biannually	16,910	100 % of values < ELV	14,276	Nm3/hr	yes	CRM		
A218	TA Luft inorganic dust particles class 1	Biannually	0.05	100 % of values < ELV	0.0010	mg/Nm3	yes	CRM	0.13	
A218	TA Luft inorganic dust particles class 2	Biannually	0.20	100 % of values < ELV	0.0126	mg/Nm3	yes	CRM	1.69	
A218	TA Luft inorganic dust particles class 3	Biannually	0.20	100 % of values < ELV	0.0052	mg/Nm3	yes	CRM	0.69	
A218	Total Dusts	Biannually	20	100 % of values < ELV	0.31	mg/Nm3	yes	CRM	41.7	
A217	Volumetric flow	Quarterly	120,000	100 % of values < ELV	61,617	Nm3/hour	yes	EN 13284-1:2002		
A214/A215/A216/A217	TA Luft organic substances class 1	Quarterly	5	100 % of values < ELV	0.36	mg/Nm3	yes	EN 13649:2001	230	
A217	TA Luft organic substances class 2	Quarterly	20	100 % of values < ELV	0.29	mg/Nm3	yes	EN 13649:2001	143	
A217	TA Luft organic substances class 3	Quarterly	50	100 % of values < ELV	2.55	mg/Nm3	yes	EN 13649:2001	1331	
A214/A215/A216	Volumetric flow	Quarterly	4,000	100 % of values < ELV	2066.5	Nm3/hour	yes	EN 13284-1:2002		
A214/A215/A216	Carbon monoxide (CO)	Quarterly	600	All 30-minutes averages < 2 x ELV	81.14	mg/Nm3	yes	EN 15058:2004		
A214/A215/A216	Nitrogen oxides (NOx/NO2)	Quarterly	200	All 30-minutes averages < 2 x ELV	24.69	mg/Nm3	yes	EN 14792:2005		
A214/A215/A216	Total Organic Carbon (as C)	Quarterly	50	100 % of values < ELV	1.03	mg/Nm3	yes	EN 13526:2002	2768.7	
A105/A107/A110/A111	Volumetric flow	Quarterly	86,655	100 % of values < ELV	27062	Nm3/hour	yes	EN 13284-1:2002		
A206/A207/A208/A209/A210/A211/A212/A213	Volumetric flow	Quarterly	64,570	100 % of values < ELV	23747	Nm3/hour	yes	EN 13284-1:2002		

Air Summary Template

AIR-summary template			Lic No:		P0207-03		Year		2013	
A249/A250/A251	Volumetric flow	Quarterly	87,070	100 % of values < ELV	39029	Nm ³ /hour	yes	EN 13284-1:2002		
A105/A107/A110/A111	Total Fluoride	Quarterly	30.3	100 % of values < ELV	0.99	g/hour	yes	ISO 15713:2006	338.3	Method adapted to include filter
A206/A207/A208/A209/A210/A211/A212/A213	Total Fluoride	Quarterly	14.5	100 % of values < ELV	4.01	g/hour	yes	ISO 15713:2006		Method adapted to include filter
A249/A250/A251	Total Fluoride	Quarterly	26	100 % of values < ELV	1.94	g/hour	yes	ISO 15713:2006		Method adapted to include filter
A105/A107/A110/A111/A206-A213/A249-A251	Total acids	Quarterly	4	100 % of values < ELV	0.20	mg/Nm ³	yes	EN 1911-1 (Part 1)	551.5	
Ambient (TA/TF-1)	Total Fluoride	Biannually	N/A	N/A	<0.4	ug/m ³	N/A	CRM		Modified method NIOSH 7903
Ambient (TA/TF-2)	Total Fluoride	Biannually	N/A	N/A	<0.4	ug/m ³	N/A	CRM		Modified method NIOSH 7904
Ambient (TA/TF-1)	Total Acidity	Biannually	N/A	N/A	<0.9	ug/m ³	N/A	CRM		Modified method NIOSH 7905
Ambient (TA/TF-2)	Total Acidity	Biannually	N/A	N/A	<1.0	ug/m ³	N/A	CRM		Modified method NIOSH 7906
Ambient (L1-L5)	Nitrogen dioxide	Biannually	N/A	N/A	14.9	ug/m ³	N/A	CRM		UV Spectrophotometry
Vegetation	Fluoride	Quarterly	N/A	N/A	9.1	mg/kg	N/A	OTH		Ion selective electrode

Note 1: Volumetric flow shall be included as a reportable parameter

AIR-summary template		Lic No:	P0207-03	Year	2013
Continuous Monitoring					
4	Does your site carry out continuous air emissions monitoring?	Yes			
	If yes please review your continuous monitoring data and report the required fields below in Table A2 and compare it to its relevant Emission Limit Value (ELV)				
5	Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below	Yes			
6	Do you have a proactive service agreement for each piece of continuous monitoring equipment?	Yes			
7	Did your site experience any abatement system bypasses? If yes please detail them in table A3 below	Yes			

Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	ELV in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (hours)	Number of ELV exceedences in current reporting year	Comments
A214-A216	Total Organic Carbon (as C)	50	30 minute	All 30-minutes averages < 2 x ELV	mg/Nm3	0.43	93.04	17	None	97% of all 30-minute mean values in 2013 were < 1.2 ELV.
A214-A216	Total Organic Carbon (as C)	50	24 hour	Daily average < ELV	mg/Nm3	0.43	30.61		None	
A214-A216	Nitrogen oxides (NOx/NO2)	200	30 minute	All 30-minutes averages < 2 x ELV	mg/Nm3	15.01	203.29		None	97% of all 30-minute mean values in 2013 were < 1.2 ELV.
A214-A216	Nitrogen oxides (NOx/NO2)	200	24 hour	Daily average < ELV	mg/Nm3	15.1	120.16		None	
A214-A216	Carbon monoxide (CO)	600	30 minute	All 30-minutes averages < 2 x ELV	mg/Nm3	102.91	330.72		None	97% of all 30-minute mean values in 2013 were < 1.2 ELV.
A214-A216	Carbon monoxide (CO)	600	24 hour	Daily average < ELV	mg/Nm3	102.93	216.86		None	
Ambient	Nitrogen oxides (NOx/NO2)	N/A		N/A	µg/Nm3	28	1129	39	N/A	

note 1: Volumetric flow shall be included as a reportable parameter.

Table A3: Abatement system bypass reporting table

[Bypass protocol](#)

Date*	Duration** (hours)	Location	Reason for bypass	Impact magnitude	Corrective action
29/03/2013	9.3	Fab 24 RCTO	CPU failure on RCTO	No impact	CPU was repaired and system returned to normal operation.
23/07/2013	13.2	Fab 24 RCTO	Desorber rotor temperature controller failure	No impact	Temperature controller was replaced and system returned to normal operation.

* this should include all dates that an abatement system bypass occurred

** an accurate record of time bypass beginning and end should be logged on site and maintained for future Agency inspections please refer to bypass protocol link

Solvent use and management on site

8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5 Yes

Table A4: Solvent Management Plan Summary		Please refer to linked solvent regulations to complete table 5 and 6			
Total VOC Emission limit value		Solvent regulations			
Reporting year	Total solvent input on site (kg)	Total Fugitive emissions to Air from site (kg)	Fugitive emissions as % of solvent input	Fugitive Emission Limit Value (ELV) (%) in licence or any revision thereof	Compliance
2013	474002	1910	0.40	15% of total solvent input	Yes

Table A5: Solvent Mass Balance summary	Not required for reporting year 2013
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AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)	Lic No: P0207-03	Year 2013
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Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If you do not have licensed emissions you still need to complete table W1 and or W2 for storm water analysis and visual inspections

Additional information	
Yes	
Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising only any evidence of contamination noted during visual inspections	Yes

Table W1 Storm water monitoring

Location reference	Location relative to site activities	PRTR Parameter	Licensed Parameter	Monitoring date	ELV or trigger level in licence or any revision thereof*	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Comments
SW1	onsite	N/A	pH	Weekly	~6-9.3/10.6	N/A	8	pH units	N/A	Action Limits Agreed with the EPA (changes from winter to summer)
SW1	onsite	N/A	Conductivity	Weekly	36	N/A	22.9	mg/L	N/A	
SW1	onsite	N/A	Total Organic Carbon (as C)	Weekly	1000	N/A	616.4	µS/cm@25oC	N/A	
SW1	onsite	N/A	Arsenic and compounds (as As)	Biannual	21	N/A	4.7	mg/L	N/A	
SW1	onsite	N/A	Chromium and compounds (as Cr)	Biannual	N/A	N/A	1	µg/L	N/A	
SW1	onsite	N/A	Cobalt	Biannual	N/A	N/A	1	µg/L	N/A	
SW1	onsite	N/A	Copper and compounds (as Cu)	Biannual	N/A	N/A	6	µg/L	N/A	
SW1	onsite	N/A	Lead and compounds (as Pb)	Biannual	N/A	N/A	1	µg/L	N/A	
SW1	onsite	N/A	Nickel and compounds (as Ni)	Biannual	N/A	N/A	2	µg/L	N/A	
SW1	onsite	N/A	Tin	Biannual	N/A	N/A	1	µg/L	N/A	

*trigger values may be agreed by the Agency outside of licence conditions

Table W2 Visual inspections-Please only enter details where contamination was observed.

Location Reference	Date of inspection	Description of contamination	Source of contamination	Corrective action	Comments
SW1	14/05/2013	Suspended solids present in retention pond	site	Retention pond closed until solids settled	source was found to be naturally occurring suspended solids from groundwater discharged to surface water
SW1	15/05/2013	Suspended solids present in retention pond	site	Retention pond closed until solids settled	source was found to be naturally occurring suspended solids from groundwater discharged to surface water
SW1	18/11/2013	Suspended solids present in retention pond	site	Retention pond closed until solids settled	source was found to be naturally occurring suspended solids from groundwater discharged to surface water
SW1	11/12/2013	Small film of oil observed in retention pond	site	Retention pond closed and oil booms used to remove oil	Source of oil was compressor fire incident which was notified to the EPA on 11/12/13 Notification No: INCI002968
SW1	12/12/2013	Small film of oil observed in retention pond	site	Retention pond closed and oil booms used to remove oil	Source of oil was compressor fire
SW1	13/12/2013	Small film of oil observed in retention pond	site	Retention pond closed and oil booms used to remove oil	Source of oil was compressor fire
SW1	14/12/2013	Small film of oil observed in retention pond	site	Retention pond closed and oil booms used to remove oil	Source of oil was compressor fire
SW1	15/12/2013	Small film of oil observed in retention pond	site	Retention pond closed and oil booms used to remove oil	Source of oil was compressor fire
SW1	16/12/2013	Small film of oil observed in retention pond	site	Retention pond closed and oil booms used to remove oil	Source of oil was compressor fire
SW1	17/12/2013	Small film of oil observed in retention pond	site	Retention pond closed and oil booms used to remove oil	Source of oil was compressor fire
SW1	18/12/2013	Small film of oil observed in retention pond	site	Retention pond closed and oil booms used to remove oil	Source of oil was compressor fire
SW1	19/12/2013	Small film of oil observed in retention pond	site	Retention pond closed and oil booms used to remove oil	Source of oil was compressor fire
SW1	20/12/2013	Small film of oil observed in retention pond	site	Retention pond closed and oil booms used to remove oil	Source of oil was compressor fire

Licensed Emissions to water and /or wastewater(sewer)-periodic monitoring (non-continuous)

3 Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below

No	Additional information
Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External/Internal Lab Quality Assessment of results checklist Yes

Table W3: Licensed Emissions to water and /or wastewater (sewer)-periodic monitoring (non-continuous)

Emission reference no:	Emission released to	Parameter/ Substance/Note 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof**	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments
SE1	Wastewater/Sewer	BOD	composite	Weekly	1350		All results < 1.2 times ELV, plus 8 from ten results must be < ELV	200.50	kg/day	yes	Dissolved Oxygen Meter (Electrode)	APHA / AWWA "Standard Methods"	52108	70,308	
SE1	Wastewater/Sewer	COD	composite	Weekly	2700		All results < 1.2 times ELV, plus 8 from ten results must be < ELV	267.51	kg/day	yes	Closed Reflux Colorimetric Method	APHA / AWWA "Standard Methods"	52200	65,312	
SE1	Wastewater/Sewer	Inorganic Suspended Solids	composite	Weekly	2700		All results < 1.2 times ELV, plus 8 from ten results must be < ELV	38.90	kg/day	yes	In house calculation (TSS - VSS)	N/A	N/A	14,198	
SE1	Wastewater/Sewer	Suspended Solids	composite	Weekly	4125		All results < 1.2 times ELV, plus 8 from ten results must be < ELV	115.41	kg/day	yes	Gravimetric analysis	APHA / AWWA "Standard Methods"	25400	32,427	
SE1	Wastewater/Sewer	Total Dissolved Solids	composite	Weekly	6070		All results < 1.2 times ELV, plus 8 from ten results must be < ELV	5796.79	kg/day	yes	Gravimetric analysis	APHA / AWWA "Standard Methods"	25400	1,835,612	
SE1	Wastewater/Sewer	Total nitrogen	composite	Weekly	540		All results < 1.2 times ELV, plus 8 from ten results must be < ELV	99.19	kg/day	yes	Total Nitrogen Analyser	I.S. (Inh Standard)	5 EN 12160:2003	30,964	
SE1	Wastewater/Sewer	Total phosphorus	composite	Weekly	67.5		All results < 1.2 times ELV, plus 8 from ten results must be < ELV	5.71	kg/day	yes	Digestion + Spectrophotometry	APHA / AWWA "Standard Methods"	4500-PB and Hach	1,996	
SE1	Wastewater/Sewer	Fluorides (as total F)	composite	Weekly	160		All results < 1.2 times ELV, plus 8 from ten results must be < ELV	29.21	kg/day	yes	Ion Chromatography	APHA / AWWA "Standard Methods"	44108	8,851	
SE1	Wastewater/Sewer	Cyanides (as total CN)	composite	Weekly	0.1		All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.01	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	4500-CN-E	N/A	
SE1	Wastewater/Sewer	Cyanides (as total CN)	composite	Weekly	1.35		All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.04	kg/day	yes	Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	4500-CN-E	0.44	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)															
Lic No: P0207-03 Year 2013															
SE1	Wastewater/Sewer	Arsenic and compounds (as As)	composite	Weekly	Yearly	0.1	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.001	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	N/A	
SE1	Wastewater/Sewer	Arsenic and compounds (as As)	composite	Weekly	Yearly	1.35	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.01	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	0.06	
SE1	Wastewater/Sewer	Copper and compounds (as Cu)	composite	Weekly	Yearly	0.3	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.03	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	N/A	
SE1	Wastewater/Sewer	Copper and compounds (as Cu)	composite	Weekly	Yearly	4.05	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.23	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	79	
SE1	Wastewater/Sewer	Chromium and compounds (as Cr)	composite	Weekly	Yearly	0.1	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.001	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	N/A	
SE1	Wastewater/Sewer	Chromium and compounds (as Cr)	composite	Weekly	Yearly	1.35	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.01	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	0	
SE1	Wastewater/Sewer	Nickel and compounds (as Ni)	composite	Weekly	Yearly	0.2	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.004	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	N/A	
SE1	Wastewater/Sewer	Nickel and compounds (as Ni)	composite	Weekly	Yearly	2.7	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.03	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	7	
SE1	Wastewater/Sewer	Tin	composite	Weekly	Yearly	0.4	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.001	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	N/A	
SE1	Wastewater/Sewer	Tin	composite	Weekly	Yearly	5.4	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.01	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	0	
SE1	Wastewater/Sewer	Lead and compounds (as Pb)	composite	Weekly	Yearly	0.4	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.002	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	N/A	
SE1	Wastewater/Sewer	Lead and compounds (as Pb)	composite	Weekly	Yearly	5.4	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.01	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	0.87	
SE1	Wastewater/Sewer	Total heavy metals	composite	Weekly	Yearly	13.5	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.29	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	97	
SE1	Wastewater/Sewer	Ammonia (as N)	composite	Weekly	Yearly	N/A	N/A	49.90	kg/day	N/A	UV/Vis	APHA / AWWA "Standard Methods"	4500-NH3 F	18.183	
SE1	Wastewater/Sewer	Cobalt	composite	Weekly	Yearly	N/A	N/A	0.01	kg/day	N/A	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement)	0	
SE1	Wastewater/Sewer	Nitrate (as N)	composite	Weekly	Yearly	N/A	N/A	30.45	kg/day	N/A	Ion Chromatography	APHA / AWWA "Standard Methods"	4110B	6.300	
SE1	Wastewater/Sewer	Sulphate	composite	Weekly	Yearly	N/A	N/A	2473.16	kg/day	N/A	Ion Chromatography	APHA / AWWA "Standard Methods"	4110B	781.290	

Note 1: Volumetric flow shall be included as a reportable parameter

Note 2: Where Emission Limit Values (ELV) do not apply to your licence please compare results against EQS for Surface water or relevant receptor quality standards.

Continuous monitoring

5 Does your site carry out continuous emissions to water/sewer monitoring?

If yes please summarise your continuous monitoring data below in Table W4 and compare it to its relevant Emission Limit Value (ELV)

6 Did continuous monitoring equipment experience downtime? If yes please record downtime in table W4 below

7 Do you have a proactive service contract for each piece of continuous monitoring equipment on site?

8 Did abatement system bypass occur during the reporting year? If yes please complete table W5 below

Table W4: Summary of average emissions -continuous monitoring

Emission reference no:	Emission released to	Parameter / Substance	ELV or trigger values in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission for current reporting year (kg)	% change +/- from previous reporting year	Monitoring Equipment Downtime (hours)	Number of ELV exceedences in reporting year	Comments
SE1	Wastewater/Sewer	volumetric flow	16500	Yearly	No flow value shall exceed the specific limit	m ³ /day	7658	-1.4	162.5	0	SE1 flowmeter was bypassed during upgrade works as notified to the EPA through the Alder system; Licensee Return LR001445
SE1	Wastewater/Sewer	volumetric flow	720	Yearly	No flow value shall exceed the specific limit	m ³ /hr	319	-1.5	162.5	0	SE1 flowmeter was bypassed during upgrade works as notified to the EPA through the Alder system; Licensee Return LR001445
SE1	Wastewater/Sewer	volumetric flow	200	Yearly	No flow value shall exceed the specific limit	l/sec	88.6	-1.5	162.5	0	SE1 flowmeter was bypassed during upgrade works as notified to the EPA through the Alder system; Licensee Return LR001445
SE1	Wastewater/Sewer	pH	6-9.5	Yearly	No pH value shall deviate from the specified range	pH units	7.35	2.1	162.5	0	SE1 pH meter was bypassed during upgrade works as notified to the EPA through the Alder system; Licensee Return LR001445. pH readings were taken manually every 6 hours during the bypass
SE1	Wastewater/Sewer	temperature	30	Yearly	No temperature value shall exceed the limit value	degrees C	22.87	-2.9	162.5	0	SE1 thermometer was bypassed during upgrade works as notified to the EPA through the Alder system; Licensee Return LR001445

note 1: Volumetric flow shall be included as a reportable parameter.

Table W5: Abatement system bypass reporting table

Date	Duration (hours)	Location	Resultant emissions	Reason for bypass	Corrective action*	Was a report submitted to the EPA?	When was this report submitted?
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Measures taken or proposed to reduce or limit bypass frequency

Bund/Pipeline testing template	Lic No: P0207-03	Year: 2013		
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Bund testing dropdown menu click to see options

Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to all bunds which failed the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)

- 1 Please provide integrity testing frequency period
- 2 Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)
- 3 How many bunds are on site?

Additional information	
Yes	
3 years	
Yes	
143	
11	The bunds that have not been tested within the required schedule have recently returned to use and are scheduled to be tested as part of a wider site bund risk assessment review in Q2 2014
27	
Yes	
All	
13	
All	
No	One sump containing low risk waste water does not have a high liquid level alarm but one is due to be fitted.
Yes	All failsafe systems are subject to a maintenance and testing programme.
No	

- 5 How many of these bunds have been tested within the required test schedule?
- 6 How many mobile bunds are on site?
- 7 Are the mobile bunds included in the bund test schedule?
- 8 How many of these mobile bunds have been tested within the required test schedule?
- 9 How many sumps on site are included in the integrity test schedule?
- 10 How many of these sumps are integrity tested within the test schedule?

Please list any sump integrity failures in table B1

11 Do all sumps and chambers have high level liquid alarms?

12 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?

13 Is the Fire Water Retention Pond included in your integrity test programme?

Table B1: Summary details of bund /containment structure integrity test

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
Bund no. 65a	other (please specify)	CRC Lined concrete	concentrated copper waste	33	16.5	Hydraulic test	N/A	02/07/2013	Yes	Fail	Bund wall penetration is passing	Repaired crack	2014	N/A
Bund no. 65b	other (please specify)	CRC Lined concrete	hydrofluoric acid waste	78	25.3	Hydraulic test	N/A	02/07/2013	Yes	Fail	Sump wall CRC coating was damaged	Relined	2014	N/A
Bund no. 65c	other (please specify)	CRC Lined concrete	slurry copper waste	117	4.18	Hydraulic test	N/A	04/07/2013	Yes	Fail	Crack in trench wall	Repaired crack	2014	N/A

* Capacity required should comply with 25% or 10% containment rule as detailed in your licence

Has integrity testing been carried out in accordance with licence requirements and are all structures tested in

15 line with BS8007/EPA Guidance? [bundings and storage guidelines](#)

16 Are channels/transfer systems to remote containment systems tested?

17 Are channels/transfer systems compliant in both integrity and available volume?

Commentary	
Yes	
Yes	
Yes	

Pipeline/underground structure testing

Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc ? if yes please fill out table 2 below listing

1 all underground structures and pipelines on site **which failed the integrity test and all which have not been tested within the integrity test period as specified**

2 Please provide integrity testing frequency period

*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

Yes	
3 years	

Table B2: Summary details of pipeline/underground structures integrity test

Structure ID	Type system	Material of construction:	Does this structure have Secondary containment?	Type of secondary containment	Type integrity testing	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

A written record of all integrity tests and any maintenance or remedial work arising from them is maintained on-site

Groundwater/Soil monitoring template	Lic No:	P207-03	Year	2013
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		Comments
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	yes
2	Are you required to carry out soil monitoring as part of your licence requirements?	no
3	Do you extract groundwater for use on site? If yes please specify use in comment section	no
4	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below.	yes
5	Is the contamination related to operations at the facility (either current and/or historic)	no
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	yes
7	Please specify the proposed time frame for the remediation strategy	N/A
8	Is there a licence condition to carry out/update ELRA for the site?	yes
9	Has any type of risk assessment been carried out for the site?	yes
10	Has a Conceptual Site Model been developed for the site?	yes
11	Have potential receptors been identified on and off site?	yes
12	Is there evidence that contamination is migrating offsite?	no

Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretation as an additional section in this AER

Some wells were found to be in exceedance of the EPA IGVs for the following parameters: conductivity, Chloride, total ammonia and nitrate. Chloride, conductivity and total ammonia have been detected in concentrations above the IGVs in both up-gradient and down-gradient wells. This suggests that the source of the contamination is an up-gradient offsite source. The elevated levels of these parameters were the subject of a report commissioned by Intel in 2009. The conclusion of this report was that elevated levels were due to an off-site leaking sewer south of Intel owned by KCC.

A report was commissioned by Intel and carried out by TMS to verify source of pollution. The conclusion of the report was that elevated levels were due to an offsite leaking sewer south of Intel owned by KCC.

Report mentioned above was sent to KCC as requested by the EPA but we have received no reply to date.

One well, MW20, was found to be in exceedance of the IGV for nitrate in the first biannual sampling round in February 2013 but the second biannual sampling result in August 2013 was below the IGV which is in line with historical results.

MW14 was decommissioned due to a well blockage in December 2013 and a replacement well, MW14A, was drilled. There is no 5 year trend data available for MW14A as 2013 is the first sampling year.

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	IGV	Upward trend in pollutant concentration over last 5 years of monitoring data
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW1	pH	pH Electrode	Biannual	7.2	7	pH Units	N/A	≥ 6.5 and ≤ 9.5	no

Groundwater/Soil monitoring template				Lic No:	P207-03	Year	2013			
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW1	Conductivity	Conductivity Meter	Biannual	1381	1307.5	uS/cm	800-1875	1000	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW1	COD	Microdigestion, colorimetry	Biannual	42	22.25	mg/l O2	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW1	Nitrate	Ion Selective Electrode	Biannual	4.72	3.96	mg/l NO3	37.5	25	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW1	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.1255	mg/l as NH4	N/A	0.15	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW1	Total Nitrogen	Addition of TKN + TON	Biannual	12	6.9	mg/l N	N/A	N/A	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW1	Chloride	Titration	Biannual	173	167.5	mg/l Cl	24-187.5	30	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW1	Fluoride	Ion Selective Electrode	Biannual	0.218	0.2115	mg/l F	N/A	1	no

Groundwater/Soil monitoring AER Template

Groundwater/Soil monitoring template				Lic No:	P207-03	Year	2013			
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW7	pH	pH Electrode	Biannual	7.4	7.25	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW7	Conductivity	Conductivity Meter	Biannual	875	738	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW7	COD	Microdigestion, colorimetry	Biannual	52	42.5	mg/l O2	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW7	Nitrate	Ion Selective Electrode	Biannual	4.58	3.885	mg/l NO3	37.5	25	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW7	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW7	Total Nitrogen	Addition of TKN + TON	Biannual	2.5	2.4	mg/l N	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW7	Chloride	Titration	Biannual	28	27	mg/l Cl	24-187.5	30	no

Groundwater/Soil monitoring AER Template

Groundwater/Soil monitoring template				Lic No:	P207-03	Year	2013			
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW7	Fluoride	Ion Selective Electrode	Biannual	0.0709	0.06715	mg/l F	N/A	1	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW8	pH	pH Electrode	Biannual	7.2	7.15	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW8	Conductivity	Conductivity Meter	Biannual	759	634	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW8	COD	Microdigestion, colorimetry	Biannual	76	61	mg/l O2	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW8	Nitrate	Ion Selective Electrode	Biannual	3.06	2.88	mg/l NO3	37.5	25	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW8	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW8	Total Nitrogen	Addition of TKN + TON	Biannual	3.2	2.4	mg/l N	N/A	N/A	no

Groundwater/Soil monitoring template				Lic No:	P207-03	Year	2013			
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW8	Chloride	Titration	Biannual	46	40.75	mg/l Cl	24-187.5	30	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW8	Fluoride	Ion Selective Electrode	Biannual	0.084	0.0813	mg/l F	N/A	1	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW9	pH	pH Electrode	Biannual	7.2	7.1	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW9	Conductivity	Conductivity Meter	Biannual	710	692.5	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW9	COD	Microdigestion, colorimetry	Biannual	31	16.75	mg/l O2	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW9	Nitrate	Ion Selective Electrode	Biannual	2.11	1.65	mg/l NO3	37.5	25	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW9	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15	no

Groundwater/Soil monitoring AER Template

Groundwater/Soil monitoring template				Lic No:	P207-03	Year	2013			
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW9	Total Nitrogen	Addition of TKN + TON	Biannual	2.7	2.65	mg/l N	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW9	Chloride	Titration	Biannual	21.5	21	mg/l Cl	24-187.5	30	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW9	Fluoride	Ion Selective Electrode	Biannual	0.139	0.1116	mg/l F	N/A	1	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW13	pH	pH Electrode	Biannual	7	6.9	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW13	Conductivity	Conductivity Meter	Biannual	1483	1426.5	uS/cm	800-1875	1000	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW13	COD	Microdigestion, colorimetry	Biannual	36	19.25	mg/l O2	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW13	Nitrate	Ion Selective Electrode	Biannual	3.55	2.775	mg/l NO3	37.5	25	no

Groundwater/Soil monitoring template				Lic No:	P207-03	Year	2013			
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW13	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW13	Total Nitrogen	Addition of TKN + TON	Biannual	2.2	1.9	mg/l N	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW13	Chloride	Titration	Biannual	130	96.75	mg/l Cl	24-187.5	30	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW13	Fluoride	Ion Selective Electrode	Biannual	0.161	0.1405	mg/l F	N/A	1	no

.+ where average indicates arithmetic mean

++. maximum concentration indicates the maximum measured concentration from all monitoring results produced during the reporting year

Table 2: Downgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit	GTV's*	IGV	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW2	pH	pH Electrode	Biannual	7.5	7.4	pH Units	N/A	≥ 6.5 and ≤ 9.5	no

Groundwater/Soil monitoring template			Lic No:	P207-03	Year	2013				
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW2	Conductivity	Conductivity Meter	Biannual	793	721	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW2	COD	Microdigestion, colorimetry	Biannual	74	50.5	mg/l O2	N/A	N/A	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW2	Nitrate	Ion Selective Electrode	Biannual	3.92	2.76	mg/l NO3	37.5	25	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW2	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW2	Total Nitrogen	Addition of TKN + TON	Biannual	10.4	6.25	mg/l N	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW2	Chloride	Titration	Biannual	42	41.75	mg/l Cl	24-187.5	30	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW2	Fluoride	Ion Selective Electrode	Biannual	0.324	0.32	mg/l F	N/A	1	no

Groundwater/Soil monitoring template										
	Lic No:	P207-03	Year	2013						
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW3	pH	pH Electrode	Biannual	7.3	7.25	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW3	Conductivity	Conductivity Meter	Biannual	836	807	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW3	COD	Microdigestion, colorimetry	Biannual	25	13.75	mg/l O2	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW3	Nitrate	Ion Selective Electrode	Biannual	6.78	3.64	mg/l NO3	37.5	25	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW3	Total Ammonia	Ion Selective Electrode	Biannual	0.82432	0.49916	mg/l as NH4	N/A	0.15	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW3	Total Nitrogen	Addition of TKN + TON	Biannual	6.3	4.15	mg/l N	N/A	N/A	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW3	Chloride	Titration	Biannual	31.5	30.75	mg/l Cl	24-187.5	30	no

Groundwater/Soil monitoring template										
					Lic No:	P207-03	Year	2013		
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW3	Fluoride	Ion Selective Electrode	Biannual	0.185	0.183	mg/l F	N/A	1	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW4	pH	pH Electrode	Biannual	7.1	6.95	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW4	Conductivity	Conductivity Meter	Biannual	1301	1224.5	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW4	COD	Microdigestion, colorimetry	Biannual	36	19.25	mg/l O2	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW4	Nitrate	Ion Selective Electrode	Biannual	15.2	12.58	mg/l NO3	37.5	25	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW4	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.13852	mg/l as NH4	N/A	0.15	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW4	Total Nitrogen	Addition of TKN + TON	Biannual	9.5	7	mg/l N	N/A	N/A	yes

Groundwater/Soil monitoring template			Lic No:	P207-03	Year	2013				
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW4	Chloride	Titration	Biannual	42	40.25	mg/l Cl	24-187.5	30	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW4	Fluoride	Ion Selective Electrode	Biannual	0.303	0.3005	mg/l F	N/A	1	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW5	pH	pH Electrode	Biannual	7.3	7.3	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW5	Conductivity	Conductivity Meter	Biannual	996	910	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW5	COD	Microdigestion, colorimetry	Biannual	40	38.5	mg/l O2	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW5	Nitrate	Ion Selective Electrode	Biannual	24.3	12.81	mg/l NO3	37.5	25	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW5	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15	no

Groundwater/Soil monitoring template										
					Lic No:	P207-03	Year	2013		
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW5	Total Nitrogen	Addition of TKN + TON	Biannual	6.3	5.2	mg/l N	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW5	Chloride	Titration	Biannual	53	51.5	mg/l Cl	24-187.5	30	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW5	Fluoride	Ion Selective Electrode	Biannual	0.716	0.707	mg/l F	N/A	1	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW10	pH	pH Electrode	Biannual	7.3	7.15	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW10	Conductivity	Conductivity Meter	Biannual	633	484	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW10	COD	Microdigestion, colorimetry	Biannual	78	43	mg/l O ₂	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW10	Nitrate	Ion Selective Electrode	Biannual	9.24	5.86	mg/l NO ₃	37.5	25	yes

Groundwater/Soil monitoring AER Template

Groundwater/Soil monitoring template		Lic No: P207-03		Year 2013						
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW10	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW10	Total Nitrogen	Addition of TKN + TON	Biannual	5.2	2.875	mg/l N	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW10	Chloride	Titration	Biannual	31.5	22	mg/l Cl	24-187.5	30	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW10	Fluoride	Ion Selective Electrode	Biannual	0.98	0.569	mg/l F	N/A	1	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW11	pH	pH Electrode	Biannual	7.5	7.3	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW11	Conductivity	Conductivity Meter	Biannual	779	615	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW11	COD	Microdigestion, colorimetry	Biannual	69	63	mg/l O2	N/A	N/A	no

Groundwater/Soil monitoring template			Lic No:	P207-03	Year	2013				
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW11	Nitrate	Ion Selective Electrode	Biannual	4.7	4.335	mg/l NO3	37.5	25	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW11	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW11	Total Nitrogen	Addition of TKN + TON	Biannual	2.4	2.35	mg/l N	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW11	Chloride	Titration	Biannual	58	44.5	mg/l Cl	24-187.5	30	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW11	Fluoride	Ion Selective Electrode	Biannual	0.656	0.64	mg/l F	N/A	1	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW12	pH	pH Electrode	Biannual	7.5	7.3	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW12	Conductivity	Conductivity Meter	Biannual	739	657	uS/cm	800-1875	1000	no

Groundwater/Soil monitoring template			Lic No:	P207-03	Year	2013				
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW12	COD	Microdigestion, colorimetry	Biannual	68	44.5	mg/l O2	N/A	N/A	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW12	Nitrate	Ion Selective Electrode	Biannual	4.05	3.31	mg/l NO3	37.5	25	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW12	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW12	Total Nitrogen	Addition of TKN + TON	Biannual	2.6	2.15	mg/l N	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW12	Chloride	Titration	Biannual	32.5	27.5	mg/l Cl	24-187.5	30	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW12	Fluoride	Ion Selective Electrode	Biannual	0.945	0.6535	mg/l F	N/A	1	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14	pH	pH Electrode	Biannual	7.2	7.2	pH Units	N/A	≥ 6.5 and ≤ 9.5	no

Groundwater/Soil monitoring template			Lic No:	P207-03	Year	2013				
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14	Conductivity	Conductivity Meter	Biannual	1491	1491	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14	COD	Microdigestion, colorimetry	Biannual	25	25	mg/l O2	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14	Nitrate	Ion Selective Electrode	Biannual	8.26	8.26	mg/l NO3	37.5	25	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.174	mg/l as NH4	N/A	0.15	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14	Total Nitrogen	Addition of TKN + TON	Biannual	2.9	2.9	mg/l N	N/A	N/A	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14	Chloride	Titration	Biannual	250	250	mg/l Cl	24-187.5	30	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14	Fluoride	Ion Selective Electrode	Biannual	0.495	0.495	mg/l F	N/A	1	no

Groundwater/Soil monitoring AER Template

Groundwater/Soil monitoring template										
					Lic No:	P207-03	Year	2013		
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14A	pH	pH Electrode	Biannual	7.3	7.3	pH Units	N/A	≥ 6.5 and ≤ 9.5	data not available
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14A	Conductivity	Conductivity Meter	Biannual	678	678	uS/cm	800-1875	1000	data not available
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14A	COD	Microdigestion, colorimetry	Biannual	22	22	mg/l O2	N/A	N/A	data not available
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14A	Nitrate	Ion Selective Electrode	Biannual	2.27	2.27	mg/l NO3	37.5	25	data not available
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14A	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	data not available
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14A	Total Nitrogen	Addition of TKN + TON	Biannual	1.4	1.4	mg/l N	N/A	N/A	data not available
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14A	Chloride	Titration	Biannual	67	67	mg/l Cl	24-187.5	30	data not available

Groundwater/Soil monitoring template									
					Lic No:	P207-03	Year	2013	
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW14A	Fluoride	Ion Selective Electrode	Biannual	0.332	0.332	mg/l F	N/A	1 data not available
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW15	pH	pH Electrode	Biannual	7.4	7.2	pH Units	N/A	≥ 6.5 and ≤ 9.5 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW15	Conductivity	Conductivity Meter	Biannual	1172	1163.5	uS/cm	800-1875	1000 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW15	COD	Microdigestion, colorimetry	Biannual	13	7.75	mg/l O2	N/A	N/A no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW15	Nitrate	Ion Selective Electrode	Biannual	3.63	2.065	mg/l NO3	37.5	25 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW15	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW15	Total Nitrogen	Addition of TKN + TON	Biannual	2.3	1.8	mg/l N	N/A	N/A no

Groundwater/Soil monitoring template									
					Lic No:	P207-03	Year	2013	
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW15	Chloride	Titration	Biannual	37.5	37.25	mg/l Cl	24-187.5	30 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW15	Fluoride	Ion Selective Electrode	Biannual	0.142	0.123	mg/l F	N/A	1 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW16	pH	pH Electrode	Biannual	7.4	7.3	pH Units	N/A	≥ 6.5 and ≤ 9.5 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW16	Conductivity	Conductivity Meter	Biannual	1415	1289	uS/cm	800-1875	1000 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW16	COD	Microdigestion, colorimetry	Biannual	106	58.5	mg/l O2	N/A	N/A no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW16	Nitrate	Ion Selective Electrode	Biannual	5.28	2.89	mg/l NO3	37.5	25 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW16	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15 no

Groundwater/Soil monitoring template										
					Lic No:	P207-03	Year	2013		
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW16	Total Nitrogen	Addition of TKN + TON	Biannual	3	1.675	mg/l N	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW16	Chloride	Titration	Biannual	87	81.5	mg/l Cl	24-187.5	30	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW16	Fluoride	Ion Selective Electrode	Biannual	0.307	0.2465	mg/l F	N/A	1	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW17	pH	pH Electrode	Biannual	7.5	7.3	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW17	Conductivity	Conductivity Meter	Biannual	1060	1047	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW17	COD	Microdigestion, colorimetry	Biannual	19	10.75	mg/l O ₂	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW17	Nitrate	Ion Selective Electrode	Biannual	3.84	2.17	mg/l NO ₃	37.5	25	yes

Groundwater/Soil monitoring AER Template

Groundwater/Soil monitoring template		Lic No: P207-03		Year		2013				
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW17	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15	yes
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW17	Total Nitrogen	Addition of TKN + TON	Biannual	2.9	1.625	mg/l N	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW17	Chloride	Titration	Biannual	35	33.25	mg/l Cl	24-187.5	30	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW17	Fluoride	Ion Selective Electrode	Biannual	0.278	0.265	mg/l F	N/A	1	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW18	pH	pH Electrode	Biannual	7.4	7.35	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW18	Conductivity	Conductivity Meter	Biannual	499	424.5	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW18	COD	Microdigestion, colorimetry	Biannual	290	250	mg/l O2	N/A	N/A	no

Groundwater/Soil monitoring AER Template

Groundwater/Soil monitoring template									
				Lic No:	P207-03	Year		2013	
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW18	Nitrate	Ion Selective Electrode	Biannual	3.77	2.135	mg/l NO3	37.5	25 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW18	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW18	Total Nitrogen	Addition of TKN + TON	Biannual	2.4	1.4	mg/l N	N/A	N/A no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW18	Chloride	Titration	Biannual	21	13.25	mg/l Cl	24-187.5	30 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW18	Fluoride	Ion Selective Electrode	Biannual	0.27	0.249	mg/l F	N/A	1 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW19	pH	pH Electrode	Biannual	7.4	7.25	pH Units	N/A	≥ 6.5 and ≤ 9.5 no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW19	Conductivity	Conductivity Meter	Biannual	974	926	uS/cm	800-1875	1000 no

Groundwater/Soil monitoring template										
					Lic No:	P207-03	Year	2013		
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW19	COD	Microdigestion, colorimetry	Biannual	25	13.75	mg/l O ₂	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW19	Nitrate	Ion Selective Electrode	Biannual	7.24	6.225	mg/l NO ₃	37.5	25	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW19	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.13852	mg/l as NH ₄	N/A	0.15	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW19	Total Nitrogen	Addition of TKN + TON	Biannual	2.9	2.8	mg/l N	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW19	Chloride	Titration	Biannual	58	52.25	mg/l Cl	24-187.5	30	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW19	Fluoride	Ion Selective Electrode	Biannual	0.413	0.346	mg/l F	N/A	1	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW20	pH	pH Electrode	Biannual	7.3	7.1	pH Units	N/A	≥ 6.5 and ≤ 9.5	no

Groundwater/Soil monitoring template			Lic No:	P207-03	Year	2013				
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW20	Conductivity	Conductivity Meter	Biannual	882	870	uS/cm	800-1875	1000	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW20	COD	Microdigestion, colorimetry	Biannual	26	14.25	mg/l O2	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW20	Nitrate	Ion Selective Electrode	Biannual	28.05	16.715	mg/l NO3	37.5	25	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW20	Total Ammonia	Ion Selective Electrode	Biannual	0.174	0.10625	mg/l as NH4	N/A	0.15	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW20	Total Nitrogen	Addition of TKN + TON	Biannual	6.9	4.55	mg/l N	N/A	N/A	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW20	Chloride	Titration	Biannual	28	27	mg/l Cl	24-187.5	30	no
19/02/2013 to 21/02/2013 and 19/8/2013 to 22/8/2013	MW20	Fluoride	Ion Selective Electrode	Biannual	0.117	0.09755	mg/l F	N/A	1	no

Groundwater/Soil monitoring template	Lic No: P207-03	Year: 2013
<p>*please note exceedance of generic assessment criteria (GAC) such as a Groundwater Threshold Value (GTV) or an Interim Guideline Value (IGV) or an upward trend in results for a substance indicates that further interpretation of monitoring results is required. In addition to completing the above table, please complete the Groundwater Monitoring Guideline Template Report at the link provided and submit separately through ALDER as a licensee return or as otherwise instructed by the EPA. Groundwater monitoring template</p> <p>More information on the use of soil and groundwater standards/ generic assessment criteria (GAC) and risk assessment tools is available in the EPA published guidance (see the link in G31) Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites (EPA 2013).</p>		
<p>**Depending on location of the site and proximity to other sensitive receptors alternative Receptor based Water Quality standards should be used in addition to the GTV e.g. if the site is close to surface water compare to Surface Water Environmental Quality Standards (SWEQS), if the site is close to a drinking water supply compare results to the Drinking Water Standards (DWS)</p>		<p>Drinking water (public supply) standards, Interim Guideline Values (IGV) Groundwater (private supply) standards Drinking water (private supply) standards Surface water EQS regulations GTV's</p>

Table 3: Soil results Not applicable

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit
							SELECT
							SELECT

Environmental Liabilities template			Lic No: P0207-03	Year:2013
Click here to access EPA guidance on Environmental Liabilities and Financial provision				
				Commentary
1	ELRA initial agreement status	Submitted and not agreed by EPA;		Previously, the ELRA was incorporated into the RMP. The initial RMP was submitted to the Agency in 2003 and was updated in 2005, 2006 and 2007. The Agency has not provided any comments on the content of any of the RMP's submitted. A draft update of the ELRA was completed at the end of December 2012, but not submitted to the Agency pending publication of guidance on Financial Provisions
2	ELRA review status	Review required and not completed;		In 2010, a standalone ELRA was produced and submitted to the Agency. The Agency has not provided any comments on the content of the ELRA. A draft update of the ELRA was completed at the end of December 2012, but not submitted to the Agency pending publication of guidance on Financial Provisions.
3	Amount of Financial Provision cover required as determined by the latest ELRA	Euro 934,000		
4	Financial Provision for ELRA status	Submitted and not agreed by EPA;		
5	Financial Provision for ELRA - amount of cover	Euro 934,000		
6	Financial Provision for ELRA - type	Other please specify		Parent Company guarantee
7	Financial provision for ELRA expiry date	None		
8	Closure plan initial agreement status	sure plan submitted and not agreed by		Incorporated into the RMP-CRAMP document submitted to the Agency in 2010. The Agency has not provided any comments on the content of the RMP-CRAMP. A draft update of the CRAMP was completed at the end of December 2012, but not submitted to the Agency pending publication of guidance on Financial Provisions.
9	Closure plan review status	Review required and not completed		
10	Financial Provision for Closure status	Submitted and not agreed by EPA;		
11	Financial Provision for Closure - amount of cover	Incorporated into the sum of Euro		
12	Financial Provision for Closure - type	Other please specify		Parent Company guarantee
13	Financial provision for Closure expiry date	None		

Environmental Management Programme/Continuous Improvement Programme template		Lic No:P0207-03	Year:2013
Highlighted cells contain dropdown menu click to view		Additional Information	
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes	Intel Ireland Ltd., hold certification to the voluntary environmental standard ISO14001 and safety stanardard OHSAS 18001 through a corporate group scheme. The site also holds site certification to the energy management standard ISO50001.
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes	
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in	Yes	
4	Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence	Yes	

Environmental Management Programme (EMP) report					
Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Waste reduction/Raw material usage efficiency	Recycle 80% of our chemical waste in line with Intel Corporation.	100	Intel Ireland recycled 57% of it's chemical waste in 2013. We did not meet the corporate goal due to deinstallation works from Fab 24. A facility has taken a trial of our calcium fluoride filter cake and are currently carrying out tests on their end product, this may be a viable recovery option for the filter cake and will increase our recycle rates in 2014 if successful.	Environmental Engineer	Reduced emissions
Waste reduction/Raw material usage efficiency	Recycle 90% of our non-hazardous waste in line with Intel Corporate targets	100	Intel Ireland exceeded the goal resulting in 94% recycling of non hazardous waste for 2013.	Environmental Engineer	Reduced emissions
Additional improvements	Investigate the feasibility of routing the CEMS gas via the sampling probes to the TOC and combustion gas analysers for checking the entire sampling system.	80	This facility was included in the new RCTO CEMS for Fab 10 and Fab 24. Preliminary design and costs were obtained for retrofitting the Fab 14 TOC sampling system.	Individual	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template			Lic No:P0207-03	Year:2013	
Additional improvements	Investigate most suitable methods available for both stack and ambient monitoring for new licence and submit proposals for approval to the Agency.	100	These were reviewed and addressed within the revised licence application.	Individual	Increased compliance with licence conditions
Additional improvements	Ensure smooth transition of maintenance/calibration of CEMS to contractors	100	Personnel were trained by the service vendor and system handed over.	Individual	Increased compliance with licence conditions
Additional improvements	Conduct a comparison of the CEMS emission results with periodic monitoring results.	10	A comparison of the Fab 24 TOC analyser with the contracted air monitoring vendor's method was carried out in Q1 and there was good correlation between the methods. This comparison will be conducted for all new analysers related to the new technology.	Individual	Increased compliance with licence conditions
Additional improvements	Conduct a quality review of continuous emissions monitoring systems including data analysis/trends analysis and operational control	100	All FMS and Cimplicity calculations were reviewed and calibration procedures were updated to meet best practice.	Individual	Increased compliance with licence conditions
Additional improvements	Monitor and engage with Corporate Intel EHS on EHS Re-engineering when implementing changes such as new software tools.	100	During 2013 the site worked closely with Intel Corporate EHS group on the deployment of a new EHS software tool. During 2013 a new internal incident tracking tool was implemented and significant work completed preparation for implementation of a tool for audit and regulatory tracking in 2014.	Individual	Improved Environmental Management Practices
Additional improvements	Ensure successful ISO14001 and ISO50001 audit	100	In 2013 the site completed a certification audit to the international energy management system standard ISO 50001 with a new vendor NSAI. During 2013 a site decision was made to drop site certification to ISO14001 environmental management standard as the site holds certification to	Individual	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template			Lic No:P0207-03	Year:2013	
Additional improvements	Ensure successful corporate ISO14001 and corporate governance audit.	100	The site completed a successful corporate governance audit in April 2013 and a corporate certification to ISO14001 and OHSAS18001 in 2013.	Individual	Improved Environmental Management Practices
Additional improvements	Ensure Intel's compliance calendar is updated for any licence changes and transition to new software tool.	0	The site did not receive its licence until the end of December 2013, updating of the compliance calendar now scheduled for Q1 2014. The new software tool for compliance calendar was delayed in 2014 and not due for deployment until 2014 and 2015.	Individual	Improved Environmental Management Practices
Additional improvements	Ensure Intel's environmental management system documentation is update to incorporate changes in communications with the EPA	100	Site EMS documentation was updated to include requirement for communciation using the Alder tool.	Individual	Improved Environmental Management Practices
Additional improvements	Introduce a software package for the management of refrigerants on site.	100	The software (Refrigerant Compliance Manager (RCM) from IHS) has been purchased. This system is being used in duplicate with the Excel based records.	Individual	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	Achieve \$2M dollars in annualized energy savings through Energy and Water conservation projects	100	The site achieved \$4M dollars in annualized energy savings through the implementation of Energy and Water Conservation projects.	Individual	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Ensure compliance with Condion 3.6.6 of IPPCL re bund integrity testing	100	Bunds that failed visual inspections in 2012 were repaired and reinspected.	Individual	Installation of infrastructure
Materials Handling/Storage/Bunding	Ensure compliance with Condion 3.6.6 of IPPCL re bund integrity testing	100	All hydrostatic testing was completed and all failed bunds were repaired	Individual	Installation of infrastructure
Materials Handling/Storage/Bunding	Ensure compliance with Condion 3.6.6 of IPPCL re bund integrity testing	100	F14 Emergency generator bund was repaired and passed a hydrostatic test	Individual	Installation of infrastructure

Environmental Management Programme/Continuous Improvement Programme template			Lic No:P0207-03	Year:2013	
Materials Handling/Storage/Bunding	Carry out integrity testing of contained storm tanks as required in Condition 6.6 of our IPPCL	100	Hydrostatic testing was completed on F10 and F14 contained storm tanks	Individual	Increased compliance with licence conditions
Materials Handling/Storage/Bunding	Track all substances used for REACH registration compliance	100	All substances tracked for registration status and SDS CLP compliance. Currently working with Corp. Materials to obtain updated SDSs and registration status intentions.	Individual	Increased compliance with licence conditions
Materials Handling/Storage/Bunding	Manage SDS compliance	100	97% of all products have a CLP SDS. We are continually working with Corporate Materials to close-out gaps.	Individual	Increased compliance with licence conditions
Materials Handling/Storage/Bunding	Ensure 2013 REACH registration deadline-readiness	100	All suppliers of products > 90 tonnes have declared their intent to register substances for the 2013 deadline.	Individual	Increased compliance with licence conditions
Materials Handling/Storage/Bunding	Carry out integrity testing of contained storm tanks as required in Condition 6.6 of our IPPCL	100	CCTV survey of F24 Process effluent line	Individual	Increased compliance with licence conditions
Materials Handling/Storage/Bunding	Carry out integrity testing of contained storm tanks as required in Condition 6.6 of our IPPCL	100	Effluent balance tank was hydrostatically tested and passed	Individual	Increased compliance with licence conditions
Reduction of emissions to Water	Track fluoride emissions to sewer against our commitment to the EPA (letter dated 5th December 2007) to reduce fluoride emissions (normalised per wafer) for future technologies.	Ongoing	Ongoing	Individual	Reduced emissions

Environmental Management Programme/Continuous Improvement Programme template

Lic No:P0207-04

Year: 2014

Environmental Management Programme (EMP) report 2014 plan

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Waste reduction/Raw material usage efficiency	Recycle 80% of our chemical waste in line with Intel Corporation.	0		Environmental Engineer	Reduced emissions
Waste reduction/Raw material usage efficiency	Recycle 90% of our non-hazardous waste in line with Intel Corporate targets	0		Environmental Engineer	Reduced emissions
Additional improvements (Air)	Determine feasibility of retrofitting the Fab 14 TOC analyser to enable routing calibration gases to the sample points to enable verification of the sampling system	70	Preliminary design and costs were obtained for this project	Individual	Improved Environmental Management Practices
Additional improvements (Air)	Develop a site specific protocol for monitoring to air of fluorides	0		Individual	Increased compliance with licence conditions
Additional improvements (Air)	Conduct performance tests on all operating air abatement equipment	0		Individual	Increased compliance with licence conditions
Additional improvements (Air)	Carry out a full ecological survey of wild and domesticated flora and fauna in the vicinity of the installation	0		Individual	Increased compliance with licence conditions

Environmental Management Programme/Continuous Improvement Programme template			Lic No:P0207-04	Year: 2014
Additional improvements (Air)	Carry out an air dispersion model validation study in line with the Agency's Air Dispersion Modelling from Industrial Installations Guidance Note (AG4).	0	Individual	Increased compliance with licence conditions
Additional improvements (Air)	Investigate how the control parameters associated with the emissions to air abatement systems correlate with emission levels of fluorides and ammonia.	0	Individual	Increased compliance with licence conditions
Additional improvements (Air)	Investigate the use of the Facilities Management System to provide continuous and recorded flow data for emissions from the acid gas scrubbers.	0	Individual	Increased compliance with licence conditions
Energy Efficiency/Utility conservation	Provide annualized savings of \$2.5M in energy projects in 2014.	0	Individual	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	Carry out an audit of the energy efficiency of the site in 2014 to meet licence condition 7.1.	0	Individual	Improved Environmental Management Practices
Additional improvements (EHS and Energy Management System)	Monitor and engage with Corporate Intel EHS on EHS Re-engineering for implementation on new software tools and changes to business processes.	0	Individual	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template		Lic No:P0207-04	Year: 2014	
Additional improvements (EHS and Energy Management System)	Ensure the site EMS documentation is updated to reflect any changes as per new IPPC licence document P0207-04	0	Individual	Improved Environmental Management Practices
Additional improvements (EHS and Energy Management System)	Ensure successful completion of the ISO50001 surveillance audit.	0	Individual	Improved Environmental Management Practices
Additional improvements (EHS and Energy Management System)	Ensure Intel's compliance calendar is updated for any licence changes.	0	Individual	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Carry out integrity testing of all loading sumps as required in Condition 6.16 of our IPPCL	0	Individual	Continued compliance with licence
Materials Handling/Storage/Bunding	Carry out integrity testing of all bunds as required in Condition 6.16 of our IPPCL	0	Individual	Continued compliance with licence
Reduction of emissions to Water	Track fluoride emissions to sewer against our commitment to the EPA (letter dated 5th December 2007) to reduce fluoride emissions (normalised per wafer) for future technologies.	0	Section Head	Reduced emissions
REACH and CLP compliance	Track all substances used in 2014 for REACH registration status and CLP compliance.	0	Environmental Engineer	REACH & CLP compliance
REACH and CLP compliance	Obtain CLP formatted SDSs for all products used on-site.	0	Environmental Engineer	REACH & CLP compliance

Noise monitoring summary report Lic No: P0207-03 Year 2013

- 1 Was noise monitoring a licence requirement for the AER period? Yes
- If yes please fill in table N1 noise summary below
- Was noise monitoring carried out using the EPA Guidance note, including [Noise Guidance note NG4](#) Yes
- 2 completion of the "Checklist for noise measurement report" included in the guidance note as table 6? No
- 3 Does your site have a noise reduction plan N/A
- 4 When was the noise reduction plan last updated? No
- 5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?

Table N1: Noise monitoring summary

Date of monitoring	Time period	Noise sensitive location -NSL (if applicable)	LA _{eq}	LA ₉₀	LA ₁₀	LA _{max}	Tonal or Impulsive noise* (Y/N)	If tonal /impulsive noise was identified was 5dB penalty applied?	Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)	Is <u>site</u> compliant with noise limits (day/evening/night)?
21/11/2013	11:38-16:42	NM-01	58-60	42-43	60-63	78-81	No	N/A	During the daytime survey periods, distant road traffic movement, occasional aircraft movement and birdsong were the primary contributors to noise in this area. Plant noise from the Intel site was not audible at this location.	Yes
21/11/2013	11:20-16:24	NM-02	55-57	41-43	57-60	74-76	No	N/A	During the daytime survey periods, distant road traffic movement, occasional aircraft movement and birdsong were the primary contributors to noise in this area. Plant noise from the Intel site was not audible at this location.	Yes
21/11/2013	11:01-16:02	NM-03	46-56	44-46	47-49	62-89	No	N/A	During the daytime survey periods, steady plant noise from the Intel site along with birdsong and distant road traffic were audible. Distant reversing alarms were also noted.	Yes
21/11/2013	10:44-15:41	NM-04	49-55	39-43	49-52	65-84	No	N/A	During the daytime survey periods, distant road traffic movements were noted as the primary contributor to the noise build up. Birdsong and occasional aircraft movements were also noted as were distant reversing alarms.	Yes
21/11/2013	10:01-15:02	NM-05	53-54	47-52	54-56	69-77	No	N/A	During the daytime survey periods, Intel construction activities and distant road traffic movements were noted as the primary contributors to the noise build-up. Plant noise from the Intel site was audible at a low level.	Yes
21/11/2013	10:17-15:20	NM-06	53-54	48-52	55-56	69-73	No	N/A	During the daytime survey periods, Intel construction activities and distant road traffic movements were noted as the primary contributors to the noise build-up. Other sources of noise included birdsong, occasional train movements and distant aircraft movements.	Yes

Noise Monitoring Summary

21/11/2013	09:39-14:41	NM-07	53-56	48-55	55-57	63-67	No	N/A	During the daytime survey periods, distant traffic on surrounding roads, occasional train movements and occasional local traffic were noted as the dominant noise sources. Plant noise from the Intel site was not audible during the daytime measurement periods.	Yes
27/11/2013	00:53-03:58	NM-01	56-59	32-35	41-44	84-86	No	N/A	During the night-time survey periods, audible noise sources included distant traffic on surrounding roads and to a lesser extent, distant plant noise.	Yes
24/10/2013	01:46-03:55	NM-02	43-45	37-39	42-45	63-75	No	N/A	During the night-time survey periods, audible noise sources included distant road traffic on surrounding roads and very distant plant noise.	Yes
24/10/2013	02:05-04:15	NM-03	42-45	40-42	43-46	53-70	No	N/A	During the night-time periods, noise levels were influenced by steady plant noise with occasional distant traffic movements.	Yes
24/10/2013	01:25-03:37	NM-04	42	39-40	42-44	58-62	No	N/A	During the night-time periods, occasional distant road traffic movements and distant plant noise from the Intel site were audible.	Yes
27/11/2013	00:30-03:37	NM-05	40-43	36-39	42-45	54-57	No	N/A	During the night-time survey periods, broadband plant noise was audible from the rear of the site. Other sources included occasional traffic movements.	Yes
27/11/2013	23:35-03:20	NM-06	40-48	35-40	41-52	53-62	No	N/A	During the night-time survey periods, occasional road traffic movements and broadband plant noise from the rear of the site were noted as the primary contributors to the noise build-up.	Yes
27/11/2013	23:08-02:57	NM-07	38-49	32-41	42-47	50-67	No	N/A	Distant traffic movements were noted to be the dominant noise source during the night-time periods. Plant noise from the Intel site were not audible during the night-time measurement period.	Yes

*Please ensure that a tonal analysis has been carried out as per guidance note NG4. These records must be maintained onsite for future inspection

If noise limits exceeded as a result of noise attributed to site activities, please choose the corrective action from the following options?	N/A
** please explain the reason for not taking action/resolution of noise issues?	
Any additional comments? (less than 200 words). None	

Resource Usage/Energy efficiency summary

Lic No:

P0207-03

Year

2013

- 1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below

[SEAI - Large Industry](#)

- Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information

[Energy Network](#)

[\(LIEN\)](#)

- 2 Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information

3

Additional information

		The site holds certification to international standard ISO50001. To support this accreditation we carry out continuous energy auditing.
2013		
Yes		
Yes		<0.1%

Table R1 Energy usage on site				
Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)	329564.96	374541.78	Production levels not provided as this information is considered intellectual property.	Energy Consumption not directly proportional to production levels therefore not included.
Total Energy Generated (MWHrs)	0	0		
Total Renewable Energy Generated (MWHrs)	31055.04	34781.64		
Electricity Consumption (MWHrs)	315458.56	339760.14		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)	0	0		
Light Fuel Oil (m3)	67.58	47.13		
Natural gas (m3)	11493506	13190960		
Coal/Solid fuel (metric tonnes)	0	0		
Peat (metric tonnes)	0	0		
Renewable Biomass	0	0		
Renewable energy generated on site	31055.04	34781.64	Note renewable energy referenced here as Heat Recovery. 2012 figure includes heat recovery from UPW plant.	

* where consumption of energy can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

Resource Usage/Energy efficiency summary Lic No: P0207-03 Year 2013

Table R2 Water usage on site					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m ³ /yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater	0	0	Production levels not provided as this information is considered intellectual property.	Production levels not provided as this information is considered intellectual property.			
Surface water	0	0					
Public supply	2920476	3088179					
Recycled water	0	0					
Total	2920476	3088179			2,795,084		

* where consumption of water can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	2097.51	3.2	347.47	1234.34	512.5
Non-Hazardous (Tonnes)	14246.69	946.77	13.30	13237.06	49.56

Table R4: Energy Audit finding recommendations								
Date of audit	Recommendations	Description of Measures proposed	Origin of measures	Predicted energy savings %	Implementation date	Responsibility	Completion date	Status and comments
Not applicable. Please note audit recommendations are evaluated. Where feasible the recommendations will become a site energy project and is tracked through the site's Environmental management objectives, targets and programmes. For high level energy information please refer to the EMP template. More detailed information is available for review at the Intel site.			SELECT					

Table R5: Power Generation: Where power is generated onsite (e.g. power generation facilities/food and drink industry)please complete the following information

Not applicable

Complaints and Incidents summary template	Lic No:	P0207-03	Year	2013
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Complaints		Additional information
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below		Yes

Table 1 Complaints summary							
Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action< 20 words	Resolution status	Resolution date	Further information
08/07/2013	Noise		Noise audible due to construction activities at the west side of the site.	Ongoing communication with the complainant of planned works in the area.	Complete	12/07/2013	The works were compliant with planning permission requirements and the activities have now ceased.
10/07/2013	Noise		Loud noise audible between 01:00-04:00 and sounded like kango hammers.	Noise survey carried out on 11/07/13 to identify the route cause. It was determined the audible noise was not due to the Intel site.	Complete	11/07/2013	
10/07/2013	Noise		Loud noise audible between 01:00-04:00 and sounded like kango hammers.	Noise survey carried out on 11/07/13 to identify the route cause. It was determined the audible noise was not due to the Intel site.	Complete	11/07/2013	
22/07/2013	Noise		Audible noise at 23:00 that sounded like moving vehicles.	Noise investigation carried out and it was determined the noise was not due to the Intel site.	Complete	24/07/2013	
16/12/2013	Noise		A continuous hum can be heard by the complainant and it is particularly audible at night.	On site investigation could not identify a change in site activities around the time of the complaint. Continuous noise monitoring is being carried out in order to gather enough data for analysis.	Ongoing	N/A	Data has been gathered from three locations in the vicinity of the complaint. The data is currently being analysed by noise consultants.
Total complaints open at start of reporting year		0					
Total new complaints received during reporting year		5					
Total complaints closed during reporting year		4					
Balance of complaints end of reporting year		1					

Incidents		Additional information
Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below		Yes

*For information on how to report and what constitutes an incident	What is an incident
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Complaints and Incidents summary template														
Table 2 Incidents summary			Lic No:	P0207-03	Year	2013								
Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of recurrence
14/02/2013	Other(Approach to the limit for Total Fluoride at Acid Scrubber A209)	Licensed discharge point (A209)	1. Minor	No Uncontrolled release	Other	Result was detected under normal operating conditions.	Normal activities	EPA	New	Determine if scrubbers are operating normally.	No preventative action required	Complete	26/03/2013	Low
23/04/2013	Spillage	Other location (Incident took place in an excavation close to the site Effluent Balance tank)	1. Minor	Ground	Other	Root cause to be investigated but this is a non routine tie in.	Construction	EPA	New	The excavation sump was pumped to the site effluent balance tank for containment. A collar was placed on the pipe to stop further leak of effluent into the excavation.	Pump out of settlement tank and feed line into the site effluent balance tanks.	Complete	26/04/2013	Low
17/05/2013	Monitoring equipment offline	Other location (Fab 24 RCTO TOC Analyser, measuring Total Organics (as C) at A214 - A217)	1. Minor	No Uncontrolled release	Other (Inadequate Operational Procedures/Training)	NA	Normal activities	EPA	New	Return analyser to sample mode.	Implement an alarm for 'zero' readings on the TOC analyser lasting more than 1 hour. Re-emphasise the importance of following operational procedures when calibrating CEMS equipment.	Complete	21/06/2013	Low
07/06/2013	Other(Monitoring equipment malfunction/maintenance)	Other location (Hydrogen generator supplying the TOC analyser in Fab 24 monitoring on emission points A214, A215, A216 and A217)	1. Minor	No Uncontrolled release	Other (Equipment failure)	NA	Normal activities	EPA	New	Install portable air conditioning unit in hunt	Order spare hydrogen generator and ensure maintenance of the unit is carried out as per manufacturer's recommendation	Complete	12/07/2013	Low
25/09/2013	Monitoring equipment offline	Other location (Ambient NOx analyser located at the site's weather station and monitors ambient air)	1. Minor	No Uncontrolled release	Monitoring equipment malfunction/maintenance	NA	Normal activities	EPA	New	Sample pump replaced	Spare sample pump to be held on site to minimise downtime	Complete	19/02/2014	Low
10/12/2013	Other(fire in compressor)	Other location (F14 Energy centre and Fab 14 contained storm system)	1. Minor	No Uncontrolled release	Other (Plant or equipment breakdown not WWTP)	NA	Normal activities	EPA	New	The retention pond was closed as a precaution and all drains contained. Oil/water mixture was removed from drain system by a tanker for disposal.	Contained storm system to be flushed to remove any remaining oil residue.	Complete	13/12/2013	Low
Total number of incidents current year	6													
Total number of incidents previous year	10													
% reduction	40%													

WASTE SUMMARY	Lic No:	P0207-03	Year	2013
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES				PRTR facility logon

Please see completed PRTR. Please note Intel do not accept waste onto site.

SECTION B- WASTE ACCEPTED ONTO SITE-TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES

		Additional Information
<p>Were any wastes <u>accepted onto</u> your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting)</p> <p>1 If yes please enter details in table 1 below</p>	No	
<p>2 Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information</p>	No	
<p>3 Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information</p>	N/A	

Schedule D Reports: Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.

P207-03 Schedule D: Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.

Design for the Environment (Technology Goals)

Intel Corporation develops and delivers a new chip manufacturing technology approximately every two years. The development cycle starts typically with six years external research in universities and government labs, followed by approximately four years joint research and development between Intel and suppliers followed by two years process development to produce a fully functional technology before transfer to high volume manufacturing (Figure 1). Intel has recognised that there is an opportunity for early engagement to effect change for environmental benefit during external and joint research, in addition to when the process is in high volume manufacturing mode. However, the optimum time to effect change for environmental design of the process is during the 2 years of final process development. The Intel Environmental Technology Development (TD) group is involved throughout this timeframe and has input into manufacturing process development, chemical selection, waste management, facility systems design and manufacturing equipment selection.

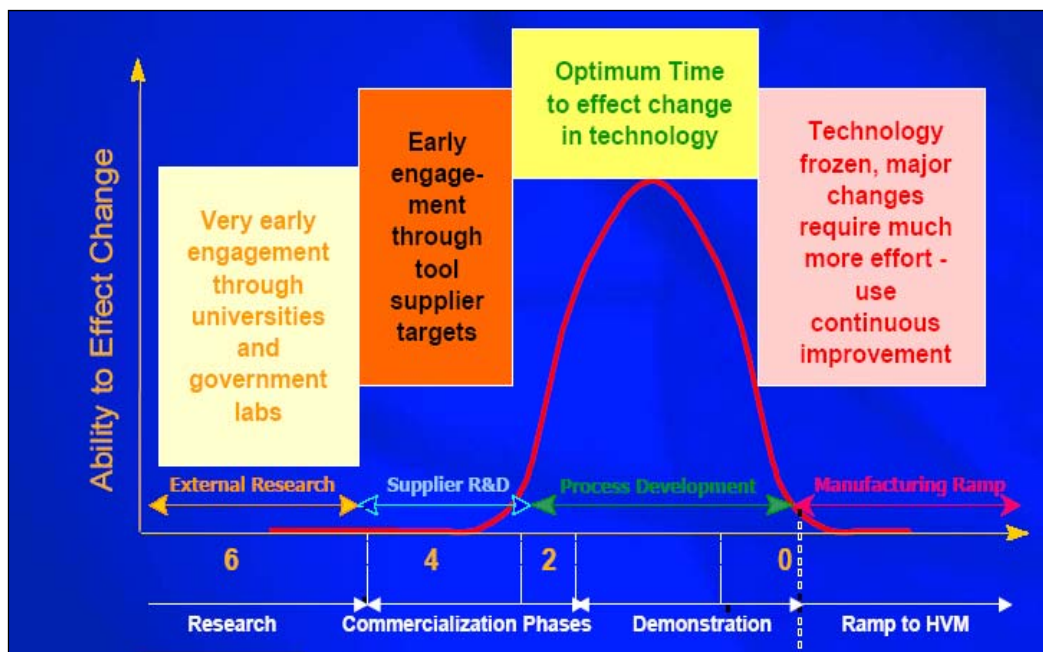


Figure 1: Effecting change during Intel process technology development

For each technology, goals are set for specific types of emissions, for example: - mass of VOCs or copper emitted per wafer produced. The methodology used for the setting of these goals is to first

Schedule D Reports: Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.

evaluate the receiving environment at each of the High Volume Manufacturing (HVM) sites. Items considered during this review would include existing site permits, local area regulations, wastewater treatment plant capacity, air and water quality standards and demographic growth projections. Against this data is set projected wafer manufacturing capacities at each of the HVMs for each of the technologies. From this are derived acceptable emissions/wafer figures for each of the HVM sites. To set the corporate goal, the lowest emission/wafer figure so calculated is used. Once the goals have been ratified at the appropriate management level, measures are put in place during the development cycle to ensure the targets are met. Measures include material selection, material substitution, recipe optimisation, emissions treatment and waste segregation. In this way, the Corporation aims to ensure that the transfer of technologies to the HVMs can be successfully transferred without detrimental effect on the local environment.

Once the technology is transferred to a receiving HVM site, such as Intel Ireland, actual emissions per unit of product for each parameter are sampled and reported to development and receiving factory site management to confirm that, when the technology is run in high volume manufacturing conditions, it performs to the goals that the Technology Development (TD) group is required to deliver.

The oldest technology being manufactured at the Ireland site (0.35 micron) was developed in 1995. The latest technology (0.065 micron or 65 nanometres) started manufacture at Intel Ireland in 2006. The 0.35 micron technology line is now a small portion of the overall capacity at Intel Ireland. The vast majority of current capacity runs the more advanced technologies where the benefits of emissions reductions are realised.

Since the inception of the environmental technology goals process, a number of additional parameters have been included in the more recent years. Currently Intel has technology goals for reducing emissions and waste per wafer produced including the following parameters:

- Emissions to Atmosphere:
 - PFC, VOC and HAPs
- Emissions to Waste Water
 - CMP Solids
 - Ammonia
 - Copper
 - Lead

Schedule D Reports: Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.

- Nickel
- Cobalt
- Tin
- Fluoride
- Waste
 - Mass of chemical waste

Material Efficiency

Process Optimisation for Material Efficiency

Due to the very minute dimensions that are patterned onto a wafer during manufacture, process chemical and gas flow set points need to be very exact.

Process optimisation through the statistical 'Design of Experiments' methodology is a practice used extensively throughout the process to determine the wafer processing recipe set points such as gas and chemical flows and power during technology development.

Using this method, tests are carried out by varying equipment recipe set points and measuring the result on the wafer. For example, in a dry etch process; set-point variables for an etchant gas may be tested at flow rates of 10, 12, 14 and 16 sccm. The flow that provides optimum results on the surface of the wafer is selected. Process optimisation ensures that excess chemicals, gases or energy are not consumed which conserves resources.

The move from 8 inch to 12 inch wafers has meant significant efficiencies are achieved in relation to raw materials used per number of product units manufactured. The 12 inch (or 300mm) wafer carries more than twice the number of dies that can be produced on an 8 inch wafer. This economy of scale has given rise to an increase in production without a proportional increase in consumption of raw materials.

Yield Improvements

In all the manufacturing technologies operated on site, yield improvement is a focus area. This covers the line yield, (the number of wafers that are not scrapped in line), as well as die yield (which is the number of functioning die per wafer at end of line). The continuous

Schedule D Reports: Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.

effort to improve yield gives rise to more efficient use of raw material, thereby conserving resources.

For example; certain compounds reduce the number of defects on the product which can cause failures in circuits and reducing die yield. Failed circuits are discarded at end of process and require replacements. Use of these chemicals reduce these process losses and makes the manufacturing process more efficient, thereby reducing overall emissions and resource use per unit of production.

PER FLUORINATED CARBON (PFC) EMISSIONS REPORT

Methodology of PFC Emissions Calculations

Following correspondence between the EPA and Intel Ireland during 1999, the following programme was agreed on 17th May 1999 under EPA reference M207/GC/11 in relation to substances that have a significant global warming potential:

In view of the company's argument that details of gas usage would place the company at a competitive disadvantage, details of inputs and outputs need not be given in any written report to the Agency, but individual annual tonnage figures for Emissions of C₂F₆, CF₄, and SF₆ must be reported separately. A full record of how the figures were calculated must be available on-site at Intel Ireland Ltd to authorised persons of the Agency at all times.

The tables at the end of this section give individual annual tonnage figures for emissions of the three gases required by the Agency (C₂F₆, CF₄, and SF₆) and a consolidated figure for three other fluorinated gases (CHF₃, NF₃ and C₄F₈). For ease of comparison between each of the gases and to allow for comparison from year to year, the emissions have also been expressed as Million Metric Tonnes Carbon Equivalent (MMTCE) which is a standard way for expressing emissions of PFC's.

The 2013 data was compiled and computed in the following manner:-

Several companies supply Intel Ireland with speciality gases for their manufacturing process. These gases are issued on a periodic basis from Intel Ireland's chemical and gas warehouses to the fabrication manufacturing plant. Intel Ireland then produces a report detailing the number and size of gas cylinders issued to the wafer fabrication operations.

In calculating emissions, a constantly improved method is periodically agreed between all European semiconductor-manufacturing facilities. These companies are members of European Semiconductors Industry Association (ESIA). The data from each company is then collated by this association on an aggregate basis annually to give one emission data point notated in MMTCE units. (Million Metric Tonnes Carbon Equivalent – an universally accepted metric for global warming impact). The collation of the Intel Ireland

data is kept by the Environmental Engineer on a shared drive within the department's EMS data retention system.

For methodical calculations, the assumption currently adopted within the industry and ratified by the world semiconductor council (WSC) is that an agreed documented % of each gas is consumed efficiently during manufacturing and conversely a fixed % of gas is emitted to atmosphere (Tier 2). Such generic assumptions are being refined across the industry globally under the remit of the WSC (World Semiconductor Council). A new calculation methodology has been adopted by ESIA which takes into account the efficiency of removal of GWP gases from point of use (POU) abatement devices deployed between the tool and the large on-site gas scrubbers. In calculating the Metric Tonnes Carbon Equivalent (MTCE) emission data, there are also assumptions taken on the global warming potential of each gas and the fact that some gases such as C₂F₆ after use can also form other by-products such as CF₄. All this information is managed within the ESIA excel spreadsheets and is summarized in terms of emissions as MMTCE in the table below. The Global Warming Potential (GWP₁₀₀) for each of the Gases is taken from the Intergovernmental Panel on Climate Change (IPCC) 4th Assessment Report. The GWP₁₀₀ values have been presented below for information purposes.

GWP₁₀₀ Values from 4th IPCC Assessment Report

C ₂ F ₆	GWP = 12,200	CHF ₃	GWP = 14,800
SF ₆	GWP = 22,800	NF ₃	GWP = 17,200
CF ₄	GWP = 7,390	C ₄ F ₈	GWP = 10,300

Intel Ireland's Emissions of PFC's

Tables 1 give details of emissions of PFCs for 2013.

Table 1 - 2013 Emissions using 4th IPCC Assessment Report GWP₁₀₀ Values (Tier 2 Methodology)

Other reporting: Per Fluorinated Carbon (PFC) Emissions Report

Parameter	Emissions (Metric Tonnes)	MMTCE
C ₂ F ₆	0.00	0.000
CF ₄	0.36	0.001
SF ₆	0.39	0.002
CHF ₃ , NF ₃ , C ₄ F ₈	1.33	0.006
Total PFC's	2.08	0.0088

During 2013, Intel Ireland also calculated its emissions using a more precise method known as "Tier 3". This uses process specific emissions factors for each of the process gases. This method gives a result which is higher than that calculated by Tier 2. Table 2 provides this data for 2013.

Table 2 - 2013 Emissions using 4th IPPC Assessment Report GWP₁₀₀ Values (Tier 3 Methodology)

Parameter	Emissions (Metric Tonnes)	MMTCE
C ₂ F ₆	0.13	0.000
CF ₄	0.70	0.001
SF ₆	0.78	0.005
CHF ₃ , NF ₃ , C ₄ F ₈	1.48	0.006
Total PFC's	3.09	0.0131*

* Note:- These calculations do not include losses of HFC refrigerant from the site chillers. The global warming impact of these losses has been estimated at 0.00063 MMTCE. If these losses are included in the "Total PFC's" figure above, then the figure would increase by approximately 6%.

For a number of years, Intel Ireland has been pursuing various reduction initiatives such as gas usage reduction with the introduction of each new process technology, gas substitution for example by the replacement of C₂F₆, in certain recipes, with alternative gases. During 2009, Intel Ireland completed its project to replace C₂F₆ on some tools in IFO with a gas which has a greater utilization rate. This means that the quantity of gas used and PFC emissions (expressed as MMTCE) are lowered. The benefits of this process change were carried forward into 2010 and the first part of 2011 when IFO was still in operation. In addition, the cessation of

Other reporting: Per Fluorinated Carbon (PFC) Emissions Report

manufacturing in IFO (heretofore, the main source of PFC emissions on site) after the first quarter of 2011 significantly affected the emissions of PFC emissions for the site. The subsequent cessation of manufacturing in Fab 24 in late 2013 to allow for the introduction of a new manufacturing technology on site contributed to the much lower emissions in 2013 in comparison with previous years.

Finally, it should be noted that emission calculation methodologies may well change in the coming years as improved calculation systems are formally adopted and verified by analytical methods across the semiconductor associations such as SIA (Semiconductor Industry Association of America), ESIA (European Semiconductor Industry Association), KIA (Korean Semiconductor Industry Association), JIA (Japanese Semiconductor Industry Association), to accommodate, for example, for the introduction of new gases, or alternate point of use abatement technologies.

Proposed PRTR Parameters for 2014

Intel Ireland is proposing the following PRTR parameters for 2014. Please note that this is an indicative listing of pollutants to be emitted and may therefore change based upon actual manufacturing operations and emissions.

Emissions to Air:

Sector-Specific PRTR Pollutants

No. Annex II	Name
06	Ammonia (NH ₃)
03	Carbon dioxide (CO ₂)
02	Carbon monoxide (CO)
04	Hydro-fluorocarbons (HFCs)
08	Nitrogen oxides (NO _x /NO ₂)
05	Nitrous oxide (N ₂ O)
09	Perfluorocarbons (PFCs)
10	Sulphur hexafluoride (SF ₆)
01	Methane
80	Chlorine and inorganic compounds (as HCl)
11	Sulphur oxides (SO _x /SO ₂)
86	Particulate Matter (PM ₁₀)

Remaining PRTR Pollutants

No. Annex II	Name
84	Fluorine and inorganic compounds (as HF)

Emissions to Wastewater:

Sector-Specific PRTR Pollutants

No.	Name
12	Total Nitrogen
13	Total Phosphorus
17	Arsenic and compounds (as As)
19	Chromium and compounds(as Cr)
20	Copper and compounds (as Cu)
22	Nickel and compounds (as Ni)
23	Lead and compounds (as Pb)
24	Zinc and compounds (as Zn)
	Total Organic Carbon (TOC) (as total C
76	or as COD/3)
79	Chlorides (as total Cl)
82	Cyanides (as total CN)
83	Fluorides (as total F)



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[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

REFERENCE YEAR	2013
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1. FACILITY IDENTIFICATION

Parent Company Name	Intel Ireland Limited
Facility Name	Intel Ireland Limited
PRTR Identification Number	P0207
Licence Number	P0207-04

Waste or IPPC Classes of Activity

No.	class_name
12.2.1	The surface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating, with a consumption capacity of more than 150 kg per hour or more than 2 year.
13.2	The manufacture of integrated circuits and printed circuit boards.
2.1	The operation of combustion installations with a rated thermal input equal to or greater than 50MW
Address 1	EHS Department
Address 2	Collinstown Industrial Park
Address 3	Leixlip
Address 4	County Kildare
	Kildare
Country	Ireland
Coordinates of Location	-6.51258 53.3749
River Basin District	IEEA
NACE Code	2611
Main Economic Activity	Manufacture of electronic components
AER Returns Contact Name	Mark Rutherford
AER Returns Contact Email Address	mark.g.rutherford@intel.com
AER Returns Contact Position	EHS Manager
AER Returns Contact Telephone Number	01-6068896
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	
Production Volume	
Production Volume Units	
Number of Installations	
Number of Operating Hours in Year	
Number of Employees	
User Feedback/Comments	Air: The annual difference in TA Luft inorganic compounds was due to changes in the limit of detection for this parameter. The annual TA Luft organics was due to one unusually high result. Wastewater: The site added one additional parameter cyanide. Cyanide did not appear in our 2012 PRTR due to zero emissions. Tin and cobalt do not appear in our PRTR 2013 due to zero emissions of these.
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
9(c)	Installations for surface treatment of substances, objects or products using organic solvents, in particular dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating
1(c)	Thermal power stations and other combustion installations
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	Yes
Have you been granted an exemption?	No
If applicable which activity class applies (as per Schedule 2 of the regulations)?	5 - Other surface cleaning
Is the reduction scheme compliance route being used?	No

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities)?	No
---	----

This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

[PRTR# : P0207 | Facility Name : Intel Ireland Limited | Filename : P0207_2013.xls | Return Year : 2013]

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASURES TO AIR												
POLLUTANT		METHOD			Please enter all quantities in this section in KGs					QUANTITY		
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Boilers Emission Point 1	Acid Gas Scrubbers Emission Point 2	Ammonia Scrubbers Emission Point 3	VOC Emission Points Emission Point 4	Speciality Exhausts Emission Point 5	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
03	Carbon dioxide (CO2)	C	ETS		27007846.4	0.0	0.0	1421465.6	0.0	28429312.0	0.0	0.0
04	Hydro-fluorocarbons (HFCs)	C	OTH	Mass Balance Calculations and Emission Factors from IPPC. Fugitive losses based upon estimates losses from on-site chillers	0.0	166.0	0.0	0.0	0.0	1918.0	0.0	1752.0
05	Nitrous oxide (N2O)	C	OTH	Mass Balance Calculations and Emission Factors from IPPC.	0.0	40990.0	0.0	0.0	0.0	40990.0	0.0	0.0
10	Sulphur hexafluoride (SF6)	C	OTH	Mass Balance Calculations and Emission Factors from IPPC.	0.0	785.0	0.0	0.0	0.0	785.0	0.0	0.0
09	Perfluorocarbons (PFCs)	C	OTH	Mass Balance Calculations and Emission Factors from IPPC.	0.0	1067.0	0.0	0.0	0.0	1067.0	0.0	0.0
02	Carbon monoxide (CO)	M	EN 15059:2004		141.7	0.0	0.0	4081.7	0.0	4223.4	0.0	0.0
08	Nitrogen oxides (NOx/NO2)	M	EN 14792:2005		10111.3	0.0	0.0	1224.8	0.0	11336.1	0.0	0.0
06	Ammonia (NH3)	M	EN 14791:2005		0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0
80	Chlorine and inorganic compounds (as HCl)	M	EN 1911-1 to 3:2003		0.0	62.9	0.0	0.0	0.0	62.9	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASURES TO AIR											
POLLUTANT		METHOD			Please enter all quantities in this section in KGs					QUANTITY	
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Acid Gas Scrubbers Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year			
84	Fluorine and inorganic compounds (as HF)	M	ISO/DIS 15713:2004		171.2	171.2	0.0	0.0			

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASURES TO AIR											
POLLUTANT		METHOD			Please enter all quantities in this section in KGs					QUANTITY	
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Acid Gas Scrubbers Emission Point 1	VOC Emission Point 2	Speciality Exhausts Emission Point 3	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
227	TA Luft inorganic dust particles class 1	M	CRM	Collection using ISO 9096 & analysis based on USEPA 29	0.0	0.0	0.13	0.13	0.0	0.0	
228	TA Luft inorganic dust particles class 2	M	CRM	Collection using ISO 9096 & analysis based on USEPA 29	0.0	0.0	1.69	1.69	0.0	0.0	
229	TA Luft inorganic dust particles class 3	M	CRM	Collection using ISO 9096 & analysis based on USEPA 29	0.0	0.0	0.69	0.69	0.0	0.0	
231	TA Luft organic substances class 2	M	EN 13649:2001		0.0	143.29	0.0	143.29	0.0	0.0	
232	TA Luft organic substances class 3	M	EN 13649:2001		0.0	1330.87	0.0	1330.87	0.0	0.0	
235	Total acids	M	EN 1911-1 to 3:2003	Part 1 only and IC analysis	551.5	0.0	0.0	551.5	0.0	0.0	
351	Total Organic Carbon (as C)	M	ALT	BS EN 12619	0.0	2768.74	0.0	2768.74	0.0	0.0	
210	Dust	M	ALT	Collection using ISO 9096 & analysis based on USEPA 29	0.0	0.0	41.7	41.7	0.0	0.0	
330	Organic solvents	C	MAB	Using emission factors for solvents used e.g. for wipes	0.0	0.0	0.0	1910.2	0.0	1910.2	
230	TA Luft organic substances class 1	M	EN 13649:2001		0.0	230.04	0.0	230.04	0.0	0.0	

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their net methane (GH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill:	Intel Ireland Limited		
Please enter summary data on the quantities of methane flared and / or utilised			Method Used

	T (Total) kg/Year	M/C/E	Method Code	Designation or Description	Facility Total Capacity m3 per hour
Total estimated methane generation (as per site model)	0.0				N/A
Methane flared	0.0				0.0 (Total Flaring Capacity)
Methane utilised in engines	0.0				0.0 (Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0				N/A

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

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SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Method Used	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
17	Arsenic and compounds (as As)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	0.06	0.060737001	0.0	0.0
79	Chlorides (as Cl)	M	OTH	Ion chromatography method based on "Standard Methods for the Examination of Water and Wastewater, 2005, 21st edition, Method 4110B published by the APHA, AWWA and WEF	54211.9	54211.91711363	0.0	0.0
19	Chromium and compounds (as Cr)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	0.06	0.057457703	0.0	0.0
20	Copper and compounds (as Cu)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	79.0	78.953498391	0.0	0.0
83	Fluorides (as total F)	M	OTH	Ion chromatography method based on "Standard Methods for the Examination of Water and Wastewater, 2005, 21st edition, Method 4110B published by the APHA, AWWA and WEF	8850.9	8850.946604272	0.0	0.0
23	Lead and compounds (as Pb)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	0.9	0.871475224	0.0	0.0
22	Nickel and compounds (as Ni)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	7.2	7.201868287	0.0	0.0
12	Total nitrogen	M	OTH	Total Nitrogen Analyser IS EN 12160:2003	30960.7	30960.685197274	0.0	0.0
76	Total organic carbon (TOC) (as total C or COD/3)	M	OTH	Calculated from COD/3. "Standard Methods for the Examination of Water and Wastewater, 2005, 21st edition, Method 4500-PB and Method 4500-PD published by the APHA, AWWA and WEF	21770.6	21770.617377655	0.0	0.0
13	Total phosphorus	M	OTH	Method based on APHA, 2012, 22nd Edition, Method 4500-CN-E	1995.7	1995.700588723	0.0	0.0
82	Cyanides (as total CN)	M	OTH	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	0.4	0.44	0.0	0.0
24	Zinc and compounds (as Zn)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	45.4	45.388538314	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Method Used	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
238	Ammonia (as N)	M	OTH	Method based on APHA, 2005, 21st Edition, Method 4500-NH3 F	18183.2	18183.166378276	0.0	0.0
303	BOD	M	OTH	Method based on APHA, 2005, 21st Edition, Method 5210-B.	70308.4	70308.397695339	0.0	0.0

[Link to previous years emissions data](#)

327	Nitrate (as N)	M	OTH	Ion chromatography method based on "Standard Methods for the Examination of Water and Wastewater, 2005, 21st edition, Method 4110B published by the APHA, AWWA and WEF	6300.1	6300.115113958	0.0	0.0
343	Sulphate	M	OTH	Ion chromatography method based on "Standard Methods for the Examination of Water and Wastewater, 2005, 21st edition, Method 4110B published by the APHA, AWWA and WEF	781289.6	781289.604186969	0.0	0.0
240	Suspended Solids	M	OTH	Method based on APHA, 2005, 21st Edition, Method 2540-D	32427.4	32427.434761285	0.0	0.0
363	Total Dissolved Solids	M	OTH	Method based on APHA, 2005, 21st Edition, Method 2540C	1335612.4	1335612.41262212	0.0	0.0
347	Total heavy metals	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	96.8	96.843834264	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : P0207 | Facility Name : Intel Ireland Limited | Filename : P0207_2013.xls | Return Year : 2013 |

Please enter all quantities on this sheet in Tonnes

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Haz Waste : Name and Licence/Permit No of Recover/Disposer	Non Haz Waste: Address of Recover/Disposer		
Within the Country	06 01 01	Yes	21.6	sulphuric acid and sulphurous acid	D9	E	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0041-01 Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
To Other Countries	06 01 01	Yes	12.89	sulphuric acid and sulphurous acid	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	06 01 04	Yes	338.78	phosphoric and phosphorous acid	D9	E	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0041-01 Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
To Other Countries	06 01 04	Yes	5.1	phosphoric and phosphorous acid	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	06 02 04	Yes	0.13	sodium and potassium hydroxide	D10	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
To Other Countries	07 01 03	Yes	12.75	organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services,BS5193IE,Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom	Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom
Within the Country	08 03 18	No	0.3107	waste printing toner other than those mentioned in 08 03 17	R12	M	Weighed	Offsite in Ireland	Brian Kehoe,WFP-CW-11-06-01	Road,Bagenalstown ,Co. Carlow,Ireland		
Within the Country	08 04 99	No	1.76	wastes not otherwise specified	R4	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland		
Within the Country	11 01 10	No	53.6	sludges and filter cakes other than those mentioned in 11 01 09	D5	M	Weighed	Offsite in Ireland	Greenstar (Knockharley Landfill),W146-02	Knockharley,Navan,Co. Meath,,Ireland		
Within the Country	11 01 10	No	99.39	sludges and filter cakes other than those mentioned in 11 01 09	D5	M	Weighed	Offsite in Ireland	Greenstar Ballynagran,W0165-02	Ballynagran,W0165-02		
To Other Countries	11 01 11	Yes	488.68	aqueous rinsing liquids containing dangerous substances	R5	M	Weighed	Abroad	Koppers UK Ltd.,EA (UK) BV770L Variation FP3034SE Variation DP3532SR.	Port Clarence Works Huntsman Drive,Huntsman Drive,Port Clarence Middlebrough ,TS21SD ,United Kingdom	Koppers UK Ltd.,EA (UK) BV770L Variation FP3034SE Variation DP3532SR.,Port Clarence Works Huntsman Drive,Huntsman Drive,Port Clarence Middlebrough ,TS21SD ,United Kingdom	Port Clarence Works Huntsman Drive,Huntsman Drive,Port Clarence Middlebrough ,TS21SD ,United Kingdom
To Other Countries	11 01 16	Yes	1.78	saturated or spent ion exchange resins	D10	M	Weighed	Abroad	Sava GmbH & Co. Kg,A51G00508	Osterweute 125541,,Brunsbuttel,,Germany	Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	11 01 16	Yes	17.85	saturated or spent ion exchange resins	R4	E	Weighed	Offsite in Ireland	Enva Ireland Ltd.,W0041-01 Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility	Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility	Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
To Other Countries	11 02 05	Yes	10.1	wastes from copper hydrometallurgical processes containing dangerous substances	R4	M	Weighed	Abroad	Veolia Environmental Services Technical solutions Ltd. (c/o Eco-safe Systems Ltd.),W0054-02,Unit 1A,Allied Industrial Estate ,Kylemore Road Ballyfermot ,D10,Ireland	Ab,0395Y0270/11181/YSO/9	Unit 1A,Allied Industrial Estate ,Kylemore Road Ballyfermot ,D10,Ireland	Ab,0395Y0270/11181/YSO/9	Mastermelt Refining Services Ltd.,CB/LN5512WL Ekokem Oy Ab,0395Y0270/11181/YSO/9	Staden Lane ,Ashbourne Road Buxton ,Derbyshire,SK17 9RZ,United Kingdom
To Other Countries	12 01 16	Yes	1.52	waste blasting material containing dangerous substances	D10	M	Weighed	Abroad	Ekokem Oy Ab,0395Y0270/11181/YSO/9	Ab,0395Y0270/11181/YSO/9	P.O. Box 181,,Rihimaki,FIN-11101,Finland	181,,Rihimaki,FIN-11101,Finland	P.O. Box 181,,Rihimaki,FIN-11101,Finland	
Within the Country	13 02 08	Yes	9.37	other engine, gear and lubricating oils	R9	E	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0184-01	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate ,Portlaoise,Co. Laois,Ireland	01,Clonminam Industrial Estate ,Portlaoise,Co. Laois,Ireland	Clonminam Industrial Estate ,Portlaoise,Co. Laois,Ireland	
Within the Country	13 05 07	Yes	7.84	oily water from oil/water separators	R9	E	Volume Calculation	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland	
Within the Country	13 05 07	Yes	113.59	oily water from oil/water separators	D8	E	Volume Calculation	Offsite in Ireland	Dublin City Council (Ringsend WWTP),D0034-01	Dublin City Council (Ringsend WWTP),D0034-01	Civic Offices Wood Quay ,Dublin 8,Ireland	Rilta Environmental Ltd.,Waste licence 192-02	Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland	
Within the Country	14 06 03	Yes	499.61	other solvents and solvent mixtures	R2	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland	
Within the Country	15 01 01	No	15.76	paper and cardboard packaging	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01	Greenstar West Dublin,W0188-01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	
Within the Country	15 01 02	No	9.44	plastic packaging	R13	M	Weighed	Offsite in Ireland	Greenstar Bray,W0053-03	Greenstar Limited,Bray Depot,Fassaroe,Bray Co. Wicklow,Ireland	Wicklow,Ireland	Crag Avenue,Clondalkin Industrial Estate,Clondalkin,Dublin 22,Ireland	Crag Avenue,Clondalkin Industrial Estate,Clondalkin,Dublin 22,Ireland	
Within the Country	15 01 03	No	1311.48	wooden packaging	R12	M	Weighed	Offsite in Ireland	Greyhound Recycling and Recovery,W0205-01	Greyhound Recycling and Recovery,W0205-01	Industrial Estate,Clondalkin,Dublin 22,Ireland	Industrial Estate,Clondalkin,Dublin 22,Ireland	Industrial Estate,Clondalkin,Dublin 22,Ireland	
Within the Country	15 01 03	No	210.58	wooden packaging	R12	M	Weighed	Offsite in Ireland	Thorntons Recycling Facility ,WFP-KE-10-061-01	Thorntons Recycling Facility ,WFP-KE-10-061-01	PDM Ltd. ,Oldmilltown ,Kill ,Co. Kildare,Ireland	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	
Within the Country	15 01 06	No	149.6	mixed packaging	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01	Greenstar West Dublin,W0188-01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	
To Other Countries	15 01 10	Yes	8.32	packaging containing residues of or contaminated by dangerous substances	D10	M	Weighed	Abroad	Ekokem Oy Ab,0395Y0270/11181/YSO/9	Ab,0395Y0270/11181/YSO/9	P.O. Box 181,,Rihimaki,FIN-11101,Finland	181,,Rihimaki,FIN-11101,Finland	P.O. Box 181,,Rihimaki,FIN-11101,Finland	
To Other Countries	15 02 02	Yes	21.18	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	D10	M	Weighed	Abroad	Ekokem Oy Ab,0395Y0270/11181/YSO/9	Ab,0395Y0270/11181/YSO/9	P.O. Box 181,,Rihimaki,FIN-11101,Finland	181,,Rihimaki,FIN-11101,Finland	P.O. Box 181,,Rihimaki,FIN-11101,Finland	

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Non-	Non Haz Waste: Address of Recover/Disposer	Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)		
Within the Country	15 02 03	No	17.96	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01		MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland		
Within the Country	15 02 03	No	1.08	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	D10	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland		
Within the Country	15 02 03	No	4.79	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	D10	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland		
Within the Country	16 02 14	No	2.892	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	D5	M	Weighed	Offsite in Ireland	Electrical Waste Management Ltd,WFP-DS-09-0012-01		Block 648,Jordanstown Drive,Greenogue Ind Est,Rathcoole,Co. Dublin		
Within the Country	16 02 14	No	141.708	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighed	Offsite in Ireland	Electrical Waste Management Ltd,WFP-DS-09-0012-01		Block 648,Jordanstown Drive,Greenogue Ind Est,Rathcoole,Co. Dublin		
To Other Countries	16 03 05	Yes	0.26	organic wastes containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	16 03 05	Yes	1.83	organic wastes containing dangerous substances	R1	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland
To Other Countries	16 03 05	Yes	2.07	organic wastes containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services,BS5193IE,Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom	Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom
Within the Country	16 03 06	No	0.44	organic wastes other than those mentioned in 16 03 05	D13	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland		
Within the Country	16 05 04	Yes	8.4	gases in pressure containers (including halons) containing dangerous substances	D15	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services,BS5193IE,Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom	Corrin,Fermoy,Co. Cork,,Ireland
To Other Countries	16 05 06	Yes	0.18	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	D10	M	Weighed	Abroad	Ekokem Oy Ab,0395Y0270/11181/YSO/9		P.O. Box 181,,Rihimaki,FIN-11101,Finland	Ekokem Oy Ab,0395Y0270/11181/YSO/9 P.O. Box 181,,Rihimaki,FIN-11101,Finland	P.O. Box 181,,Rihimaki,FIN-11101,Finland
To Other Countries	16 05 07	Yes	1.32	discarded inorganic chemicals consisting of or containing dangerous substances	D13	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services,BS5193IE,Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom	Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom
Within the Country	16 05 09	No	4.49	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08	D10	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland		

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						Non	Non		Non	Non	Non	Non	
					M/C/E	Method Used							
Within the Country	16 06 01	Yes	5.37	lead batteries	R4	M	Weighed	Offsite in Ireland	Rilta Environmental Ltd.,Waste licence 192-02		Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland	Rilta Environmental Ltd.,Waste licence 192-02,Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland	Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland
Within the Country	16 06 02	Yes	0.15	Ni-Cd batteries	R4	M	Weighed	Offsite in Ireland	Rilta Environmental Ltd.,Waste licence 192-02		Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland	Rilta Environmental Ltd.,Waste licence 192-02,Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland	Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland
Within the Country	16 06 04	No	0.23	alkaline batteries (except 16 06 03)	R4	M	Weighed	Offsite in Ireland	Rilta Environmental Ltd.,Waste licence 192-02		Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland	Rilta Environmental Ltd.,Waste licence 192-02,Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland	Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland
Within the Country	16 06 05	No	0.06	other batteries and accumulators	R4	M	Weighed	Offsite in Ireland	Rilta Environmental Ltd.,Waste licence 192-02		Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland	Rilta Environmental Ltd.,Waste licence 192-02,Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland	Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland
Within the Country	16 10 01	Yes	1.74	aqueous liquid wastes containing dangerous substances	D9	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland
Within the Country	16 10 02	No	46.56	aqueous liquid wastes other than those mentioned in 16 10 01	D9	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland
Within the Country	17 01 01	No	648.0	concrete	D5	E	Weighed	Offsite in Ireland	Balleally Landfill,W0009-03		Balleally Landfill,Lusk,,Co. Dublin,Ireland	Balleally Landfill,W0009-03,Drinnanstown North ,Rathangan,Co. Kildare,,Ireland	Balleally Landfill,Lusk,,Co. Dublin,Ireland
Within the Country	17 01 07	No	21.06	01 06 mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17	R12	E	Weighed	Offsite in Ireland	Callan Sand & Gravel Limited,WFP-KE-09-0355-01		Drinnanstown North ,Rathangan,Co. Kildare,,Ireland	Callan Sand & Gravel Limited,WFP-KE-09-0355-01,Drinnanstown North ,Rathangan,Co. Kildare,,Ireland	Callan Sand & Gravel Limited,WFP-KE-09-0355-01,Drinnanstown North ,Rathangan,Co. Kildare,,Ireland
Within the Country	17 01 07	No	391.8	01 06 mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17	R12	E	Weighed	Offsite in Ireland	Panda Waste,W0140-03		Neurendale Ltd.,Cappagh Rd,Finglas,Dublin 12,Ireland	Panda Waste,W0140-03,Neurendale Ltd.,Cappagh Rd,Finglas,Dublin 12,Ireland	Neurendale Ltd.,Cappagh Rd,Finglas,Dublin 12,Ireland
Within the Country	17 01 07	No	483.0	01 06 mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17	R12	E	Weighed	Offsite in Ireland	Roadstone Wood Limited,WFP-DS-11-0005-01		Quarry,Fortunestown,Tallaght,Dublin 24,Ireland	Roadstone Wood Limited,WFP-DS-11-0005-01,Quarry,Fortunestown,Tallaght,Dublin 24,Ireland	Quarry,Fortunestown,Tallaght,Dublin 24,Ireland
Within the Country	17 02 01	No	1.86	wood	R12	M	Weighed	Offsite in Ireland	Greenstar Millennium Park,W0183-01		Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland	Greenstar Millennium Park,W0183-01,Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland	Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland
Within the Country	17 02 01	No	17.7	wood	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01		MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	Greenstar West Dublin,W0188-01,MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland
Within the Country	17 02 02	No	3.2	glass	R12	M	Weighed	Offsite in Ireland	Glassco Recycling Limited,WFP-KE-08-0357-01		Business Park,Carragh Road,Naas Co. Kildare,Ireland	Glassco Recycling Limited,WFP-KE-08-0357-01,Business Park,Carragh Road,Naas Co. Kildare,Ireland	Business Park,Carragh Road,Naas Co. Kildare,Ireland
Within the Country	17 02 03	No	2.2	plastic	R12	M	Weighed	Offsite in Ireland	Greenstar Millennium Park,W0183-01		Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland	Greenstar Millennium Park,W0183-01,Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland	Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland
Within the Country	17 02 03	No	8.28	plastic	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01		MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	Greenstar West Dublin,W0188-01,MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland
Within the Country	17 03 02	No	360.0	bituminous mixtures containing other than those mentioned in 17 03 01	R10	E	Weighed	Offsite in Ireland	Balleally Landfill,W0009-03		Balleally Landfill,Lusk,,Co. Dublin,Ireland	Balleally Landfill,W0009-03,Balleally Landfill,Lusk,,Co. Dublin,Ireland	Balleally Landfill,Lusk,,Co. Dublin,Ireland
Within the Country	17 03 02	No	1281.48	bituminous mixtures containing other than those mentioned in 17 03 01	R12	M	Weighed	Offsite in Ireland	Callan Sand & Gravel Limited,WFP-KE-09-0355-01		Rathangan,Co. Kildare,,Ireland	Callan Sand & Gravel Limited,WFP-KE-09-0355-01,Rathangan,Co. Kildare,,Ireland	Callan Sand & Gravel Limited,WFP-KE-09-0355-01,Rathangan,Co. Kildare,,Ireland

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non-Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non-Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	17 04 01	No	188.11	copper, bronze, brass	R12	M	Weighed	Offsite in Ireland	Hammond Lane Metal,WFP-DC-09-0013-01	Hammond Lane Metal,Pigeon house Road,Dublin 4,,Ireland		
Within the Country	17 04 02	No	46.85	aluminium	R12	M	Weighed	Offsite in Ireland	Hammond Lane Metal,WFP-DC-09-0013-01	Hammond Lane Metal,Pigeon house Road,Dublin 4,,Ireland		
Within the Country	17 04 05	No	76.19	iron and steel	R12	M	Weighed	Offsite in Ireland	Hammond Lane Metal,WFP-DC-09-0013-01	Hammond Lane Metal,Pigeon house Road,Dublin 4,,Ireland		
Within the Country	17 04 05	No	4.16	iron and steel	R4	M	Weighed	Offsite in Ireland	John Tinnelly and Sons Ltd,LN/09/10	Road,Newtowncloughogue,Newry,BT35 8LZ,Ireland		
Within the Country	17 04 07	No	1722.77	mixed metals	R12	M	Weighed	Offsite in Ireland	Hammond Lane Metal,WFP-DC-09-0013-01	Hammond Lane Metal,Pigeon house Road,Dublin 4,,Ireland		
Within the Country	17 04 07	No	3.06	mixed metals	R12	M	Weighed	Offsite in Ireland	Oxigen Environmental Limited,208-1	Ballymount Industrial Estate ,Ballymount Lower ,Clondalkin ,Dublin 22,Ireland		
Within the Country	17 04 07	No	783.34	mixed metals	R4	M	Weighed	Offsite in Ireland	John Tinnelly and Sons Ltd,LN/09/10	Road,Newtowncloughogue,Newry,BT35 8LZ,Ireland	Enva Ireland Ltd.,W0184-01,Clonminam Industrial Estate ,,,Portlaoise,Co. Laois,Ireland	Clonminam Industrial Estate ,,,Portlaoise,Co. Laois,Ireland
Within the Country	17 05 03	Yes	132.08	soil and stones containing dangerous substances	R5	M	Weighed	Offsite in Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate ,,,Portlaoise,Co. Laois,Ireland		
Within the Country	17 05 04	No	2322.0	soil and stones other than those mentioned in 17 05 03	R13	M	Weighed	Offsite in Ireland	Balleally Landfill,W0009-03	Balleally Landfill,Lusk,,Co. Dublin,Ireland		
Within the Country	17 05 04	No	199.18	soil and stones other than those mentioned in 17 05 03	R10	E	Weighed	Offsite in Ireland	Callan Sand & Gravel Limited,WFP-KE-09-0355-01	Drinnanstown North ,Rathangan,Co. Kildare,,Ireland		
Within the Country	17 06 04	No	1.26	insulation materials other than those mentioned in 17 06 01 and 17 06 03	R12	M	Weighed	Offsite in Ireland	Oxigen Environmental Limited,208-1	Ballymount Industrial Estate ,Ballymount Lower ,Clondalkin ,Dublin 22,Ireland		
Within the Country	17 06 05	Yes	3.2 (18)	construction materials containing asbestos	D1	M	Weighed	Offsite in Ireland	Oxigen Environmental Limited,208-1	Ballymount Industrial Estate ,Ballymount Lower ,Clondalkin ,Dublin 22,Ireland	Oxigen Environmental Limited,208-1	Ballymount Industrial Estate ,Clondalkin ,Dublin 22,Ireland
Within the Country	17 08 02	No	156.03	gypsum-based construction materials other than those mentioned in 17 08 01	R13	M	Weighed	Offsite in Ireland	Allied Waste Management Limited,WFP-KE-08-0347-01	Estate,Clonmellon,Navan,,Ireland		
Within the Country	17 08 02	No	105.54	gypsum-based construction materials other than those mentioned in 17 08 01	R13	M	Weighed	Offsite in Ireland	Greyhound Recycling and Recovery,W0205-01	Crag Avenue,Clondalkin Industrial Estate,Clondalkin,Dublin 22,Ireland		
To Other Countries	17 09 03	Yes	0.23	other construction and demolition wastes (including mixed wastes) containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
To Other Countries	17 09 03	Yes	173.79	other construction and demolition wastes (including mixed wastes) containing dangerous substances	D10	M	Weighed	Abroad	Sava GmbH & Co. Kg,A51G00508	Osterweute 125541,,Brunsbuttel,,Germany	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	17 09 04	No	4.34	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland		

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	18 01 03	Yes	0.5	wastes whose collection and disposal is subject to special requirements in order to prevent infection	D10	M	Weighed	Offsite in Ireland	SRCL Limited,W0055-02	430 Beech Raod,Western Industrial Estate,Naas Road,Dublin 12,Ireland	SRCL Limited,W0055-02,430 Beech Raod,Western Industrial Estate,Naas Road,Dublin 12,Ireland	430 Beech Raod,Western Industrial Estate,Naas Road,Dublin 12,Ireland
Within the Country	20 01 01	No	41.24	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Baileys Recycling,WFP-FG-08-0002-01	Park,Ballycoolin Road,Dublin 11,,Ireland		
Within the Country	20 01 02	No	1.79	glass	R13	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland		
Within the Country	20 01 08	No	79.0	biodegradable kitchen and canteen waste	R12	M	Weighed	Offsite in Ireland	College Proteins Ltd.,P0037-03	College Road,Nobber,,Co. Meath,Ireland		
Within the Country	20 01 08	No	140.056	biodegradable kitchen and canteen waste	R13	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland		
Within the Country	20 01 21	Yes	3.54	fluorescent tubes and other mercury-containing waste	R5	M	Weighed	Offsite in Ireland	Irish lamps Recycling Co. Ltd.,WFP-KE-08-0348-01	Woodstock Ind. Estate ,Kilkenny Road ,Athy,Co. Kildare,Ireland	Irish lamps Recycling Co. Ltd.,WFP-KE-08-0348-01,Woodstock Ind. Estate ,Kilkenny Road ,Athy,Co. Kildare,Ireland	Woodstock Ind. Estate ,Kilkenny Road ,Athy,Co. Kildare,Ireland
Within the Country	20 01 25	No	11.77	edible oil and fat	R13	M	Weighed	Offsite in Ireland		Unit 12 Ballymount Industrial Estate,Ballymount,Dublin 12,,Ireland		
To Other Countries	20 01 27	Yes	0.17	paint, inks, adhesives and resins containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	20 01 35	Yes	28.03	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	R12	M	Weighed	Offsite in Ireland	Irish lamps Recycling Co. Ltd.,WFP-KE-08-0348-01	Woodstock Ind. Estate ,Kilkenny Road ,Athy,Co. Kildare,Ireland	Irish lamps Recycling Co. Ltd.,WFP-KE-08-0348-01,Woodstock Ind. Estate ,Kilkenny Road ,Athy,Co. Kildare,Ireland	Woodstock Ind. Estate ,Kilkenny Road ,Athy,Co. Kildare,Ireland
Within the Country	20 01 35	Yes	8.56	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	R12	M	Weighed	Offsite in Ireland	Electrical Waste Management Ltd,WFP-DS-09-0012-01	Block 648,Jordanstown Drive,Greenogue Ind Est,Rathcoole,Co. Dublin	Electrical Waste Management Limited,WFP-DS-09-0012-01,Block 648,Jordanstown Drive ,Greenogue Industrial Estate,Rathcoole Co. Dublin,Ireland	Block 648,Jordanstown Drive ,Greenogue Industrial Estate,Rathcoole Co. Dublin,Ireland
Within the Country	20 01 36	No	3.109	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R12	M	Weighed	Offsite in Ireland	Electronic Recycling,WFP-DC-09-0015-01	Unit 20 Jamestown Business Park,Jamestown Road,Finglas,Dublin 11,Ireland		
Within the Country	20 01 38	No	39.69	wood other than that mentioned in 20 01 37	R12	M	Weighed	Offsite in Ireland	Greenstar Millennium Park,W0183-01	Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland		
Within the Country	20 01 38	No	71.56	wood other than that mentioned in 20 01 37	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland		
Within the Country	20 01 40	No	2.5	metals	D13	M	Weighed	Offsite in Ireland	Greenstar Bray,W0053-03	Greenstar Limited,Bray Depot,Fassaroe,Bray Co. Wicklow,Ireland		
Within the Country	20 01 40	No	4.38	metals	R12	M	Weighed	Offsite in Ireland	Greenstar Bray,W0053-03	Greenstar Limited,Bray Depot,Fassaroe,Bray Co. Wicklow,Ireland		

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility	Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Non	Non Haz Waste: Address of Recover/Disposer				
Within the Country	20 01 40	No	4.64	metals	R13	M	Weighed	Offsite in Ireland	Greenstar Millennium Park,W0183-01		Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland			
Within the Country	20 01 40	No	9.81	metals	R13	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01		MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland			
Within the Country	20 03 01	No	5.88	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	Greenstar Millennium Park,W0183-01		Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland			
Within the Country	20 03 01	No	8.44	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01		MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland			
Within the Country	20 03 01	No	1437.1	mixed municipal waste	R12	M	Weighed	Offsite in Ireland	Greyhound Recycling and Recovery,W0205-01		Crag Avenue,Clondalkin Industrial Estate,Clondalkin,Dublin 22,Ireland			
Within the Country	20 03 07	No	0.4142	bulky waste	D13	M	Weighed	Offsite in Ireland	Greenstar Bray,W0053-03		Greenstar Limited,Bray Depot,Fassaroe,Bray Co. Wicklow,Ireland			
Within the Country	20 03 07	No	1.7658	bulky waste	R12	M	Weighed	Offsite in Ireland	Greenstar Bray,W0053-03		Greenstar Limited,Bray Depot,Fassaroe,Bray Co. Wicklow,Ireland			
Within the Country	20 03 07	No	5.2972	bulky waste	D13	M	Weighed	Offsite in Ireland	Greenstar Millennium Park,W0183-01		Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland			
Within the Country	20 03 07	No	22.5828	bulky waste	R12	M	Weighed	Offsite in Ireland	Greenstar Millennium Park,W0183-01		Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland			
Within the Country	20 03 07	No	90.7611	bulky waste	D13	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01		MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland			
Within the Country	20 03 07	No	386.9289	bulky waste	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01		MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland			
Within the Country	15 01 06	No	0.31	mixed packaging	R12	M	Weighed	Offsite in Ireland	Greenstar Millennium Park,W0183-01		Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland			
Within the Country	16 02 14	No	14.386	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	D5	E	Volume Calculation	Offsite in Ireland	Rilta Environmental Ltd.,Waste licence 192-02		Block 402 Greenogue Business Park ,Rathcoole,.,Dublin,Ireland			
Within the Country	16 02 14	No	3.28	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R12	E	Volume Calculation	Offsite in Ireland	Rilta Environmental Ltd.,Waste licence 192-02		Block 402 Greenogue Business Park ,Rathcoole,.,Dublin,Ireland			
Within the Country	16 02 14	No	704.914	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	E	Volume Calculation	Offsite in Ireland	Rilta Environmental Ltd.,Waste licence 192-02		Block 402 Greenogue Business Park ,Rathcoole,.,Dublin,Ireland			
Within the Country	17 02 01	No	11.68	wood	R12	M	Weighed	Offsite in Ireland	Oxigen Environmental Limited,208-1		Ballymount Industrial Estate ,Ballymount Lower ,Clondalkin ,Dublin 22,Ireland			
Within the Country	17 02 03	No	42.96	plastic	R12	M	Weighed	Offsite in Ireland	Greyhound Recycling and Recovery,W0205-01		Crag Avenue,Clondalkin Industrial Estate,Clondalkin,Dublin 22,Ireland			

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						Non	Non		Non	Non	M/C/E	Method Used	
Within the Country	17 02 03	No	1.08 plastic		R12	M	Weighed	Offsite in Ireland	Oxigen Environmental Limited,208-1		Ballymount Industrial Estate ,Ballymount Lower ,Clondalkin ,Dublin 22,Ireland		
Within the Country	17 05 04	No	36.8 in 17 05 03 soil and stones other than those mentioned		R13	M	Weighed	Offsite in Ireland	Callan Sand & Gravel Limited,WFP-KE-09-0355-01		Drinnanstown North ,Rathangan,Co. Kildare,,Ireland		
Within the Country	20 03 01	No	10.92 mixed municipal waste		R12	M	Weighed	Offsite in Ireland	Oxigen Environmental Limited,208-1		Ballymount Industrial Estate ,Ballymount Lower ,Clondalkin ,Dublin 22,Ireland		
Within the Country	20 03 03	No	3.0 street-cleaning residues		D8	C	Volume Calculation	Offsite in Ireland	Dublin City Council (Ringsend WWTP),D0034-01		Environmental and Engineering Department ,Civic Offices Wood Quay ,Dublin 8,Ireland		
To Other Countries	06 01 02	Yes	1.5 hydrochloric acid		D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland		Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
To Other Countries	06 01 03	Yes	0.06 hydrochloric acid		D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland		Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	06 01 03	Yes	0.88 hydrochloric acid		D9	M	Weighed	Offsite in Ireland	Enva Ireland Ltd.,W0041-01	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland		Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
To Other Countries	06 01 05	Yes	0.02 nitric acid and nitrous acid		D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland		Veolia Environmental Services,BS5193IE,Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom	Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom
To Other Countries	06 01 06	Yes	0.08 other acids		D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland		Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	06 02 01	Yes	5.69 calcium hydroxide		D9	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0041-01	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland		Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
Within the Country	06 02 04	Yes	1.14 sodium and potassium hydroxide		D9	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland		Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland
To Other Countries	06 02 05	Yes	4.13 other bases		D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland		Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	06 02 99	No	1.14 wastes not otherwise specified		D10	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland			
Within the Country	06 02 99	No	0.11 wastes not otherwise specified		D15	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland			

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						M/C/E	Method Used		Non	Non Haz Waste: Address of Recover/Disposer	ONLY		
To Other Countries	07 01 03	Yes	1.1	organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	11 01 06	Yes	19.36	acids not otherwise specified sludges and filter cakes other than those mentioned in 11 01 09	D9	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0041-01 Lagan Cement Limited,P0487-06		Clare,Ireland Killaskillen,Kinnegad,,Co. Meath,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
Within the Country	11 01 10	No	22.38	sludges and filter cakes other than those mentioned in 11 01 09	R1	M	Weighed	Offsite in Ireland	Bord na Mona PLC,W0201-03		Drehid Waste Management Facility,Carbury,,Co. Kildare,Ireland		
To Other Countries	12 01 16	Yes	1.26	waste blasting material containing dangerous substances	D10	C	Volume Calculation	Abroad	Sava GmbH & Co. Kg,A51G00508		Osterweute 125541,,Brunsbuttel,,Germany	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
To Other Countries	12 01 16	Yes	8.45	waste blasting material containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	13 05 03	Yes	1.86	interceptor sludges	R9	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0184-01		Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland	Enva Ireland Ltd.,W0184-01,Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland	Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland
To Other Countries	14 06 01	Yes	0.61	chlorofluorocarbons, HCFC, HFC	R11	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Banyard Road,Portbury West,Bristol,BS207XH,United Kingdom
To Other Countries	15 01 10	Yes	20.99	packaging containing residues of or contaminated by dangerous substances	D10	M	Weighed	Abroad	Sava GmbH & Co. Kg,A51G00508		Osterweute 125541,,Brunsbuttel,,Germany	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	15 01 10	Yes	0.54	packaging containing residues of or contaminated by dangerous substances absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by	R1	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland
To Other Countries	15 02 02	Yes	56.95	dangerous substances	D10	M	Weighed	Abroad	Sava GmbH & Co. Kg,A51G00508		Osterweute 125541,,Brunsbuttel,,Germany	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	16 02 16	No	2.11	components removed from discarded equipment other than those mentioned in 16 02 15	R13	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical solutions Ltd. (c/o Eco-safe Systems Ltd.),W0054-02 Unit 1A		Allied Industrial Estate Kylemore Road Ballyfermot D10 Ireland	Unit 1A,Allied Industrial Estate ,Kylemore Road Ballyfermot ,D10,Ireland	
Within the Country	16 03 03	Yes	10.11	inorganic wastes containing dangerous substances	D10	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland
To Other Countries	16 03 03	Yes	0.15	inorganic wastes containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany

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						M/C/E	Method Used		Haz Waste : Name and Licence/Permit No of Recover/Disposer	Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)		
Within the Country	16 03 04	No	1.24	inorganic wastes other than those mentioned in 16 03 03	D10	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Ekokem Oy Ab,0395Y0270/11181/YSO/9	Corrin,Fermoy,Co. Cork,,Ireland	P.O. Box 181,,Rihimaki,FIN-11101,Finland		
To Other Countries	16 03 04	No	0.56	inorganic wastes other than those mentioned in 16 03 03	D10	M	Weighed	Abroad					Pyros Environmental Limited,HP3835UZ,Charlestone	Charlestone Road,Hardley,Hythe, Southampton SO453ZA,United Kingdom
To Other Countries	16 05 04	Yes	0.18	gases in pressure containers (including halons) containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland		Remondis,71075031,Niederlassung Bramsche,Am Kanal 9,,49565 Bramsche,Germany	Niederlassung Bramsche,Am Kanal 9,,49565 Bramsche,Germany
To Other Countries	16 05 04	Yes	0.17	gases in pressure containers (including halons) containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland		Limited,EPR/BP3390FS,Banyard Road,Portbury West,Bristol,BS207XH,United Kingdom	Banyard Road,Portbury West,Bristol,BS207XH,United Kingdom
To Other Countries	16 05 04	Yes	4.45	gases in pressure containers (including halons) containing dangerous substances	R11	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland		Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
To Other Countries	16 05 07	Yes	0.01	discarded inorganic chemicals consisting of or containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland		Ekokem Oy Ab,0395Y0270/11181/YSO/9	Ekokem Oy Ab,0395Y0270/11181/YSO/9
To Other Countries	16 05 08	Yes	0.18	discarded organic chemicals consisting of or containing dangerous substances	D10	M	Weighed	Abroad	Ekokem Oy Ab,0395Y0270/11181/YSO/9		P.O. Box 181,,Rihimaki,FIN-11101,Finland		181,,Rihimaki,FIN-11101,Finland	P.O. Box 181,,Rihimaki,FIN-11101,Finland
To Other Countries	16 05 08	Yes	1.26	discarded organic chemicals consisting of or containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02		Corrin,Fermoy,Co. Cork,,Ireland		Kg,A51G00508,Osterweute 125541,,Brunsbuttel,,Germany	Osterweute 125541,,Brunsbuttel,,Germany
Within the Country	16 06 01	Yes	4.54	lead batteries	R4	M	Weighed	Offsite in Ireland	KMK Metals Recycling Limited,W0113-03		Cappincur Industrial Estate,Daingean Road,Tullamore,Co Offaly,Ireland		KMK Metals Recycling Limited,W0113-03,Cappincur Industrial Estate,Daingean Road,Tullamore,Co. Offaly,Ireland	Cappincur Industrial Estate,Daingean Road,Tullamore,Co. Offaly,Ireland
Within the Country	16 10 02	No	6.42	aqueous liquid wastes other than those mentioned in 16 10 01	R3	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0041-01		Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland		Clonminam Industrial Estate ...Portlaoise,Co. Laois,Ireland	
Within the Country	17 05 04	No	4.25	soil and stones other than those mentioned in 17 05 03	R9	M	Weighed	Offsite in Ireland	Enva Ireland Ltd.,W0184-01					
Within the Country	20 01 33	Yes	0.6	batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these	R4	M	Weighed	Offsite in Ireland	KMK Metals Recycling Limited,W0113-03		Cappincur Industrial Estate,Daingean Road,Tullamore,Co Offaly,Ireland		Limited,W0113-03,Cappincur Industrial Estate,Daingean Road,Tullamore,Co. Offaly,Ireland	Cappincur Industrial Estate,Daingean Road,Tullamore,Co. Offaly,Ireland
Within the Country	20 01 02	No	0.24	glass discarded electrical and electronic equipment other than those mentioned in 20 01 01	R13	M	Weighed	Offsite in Ireland	Baileys Recycling,WFP-FG-08-0002-01		Park,Ballycoolin Road,Dublin 11,,Ireland		Unit 77 Broomhill Road,Tallaght,Dublin,,Ireland	
Within the Country	20 01 36	No	91.999	01 21, 20 01 23 and 20 01 35	R12	M	Weighed	Offsite in Ireland	Rehab recycling,WFP-DS-10-0008-03					

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						M/C/E	Method Used		Non-	Non Haz Waste: Address of Recover/Disposer		
Within the Country	20 01 35	Yes	8.73	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and and 20 01 23 containing hazardous components	R12	M	Weighed	Offsite in Ireland	Rehab recycling,WFP-DS-10-0008-03	Unit 77 Broomhill Road,Tallaght,Dublin,,Ireland	Rehab Enterprises Limited,WFP-DS-10-0008-03,Unit 77,Broomhill Road,Tallaght,Dublin 24,Ireland	Unit 77,Broomhill Road,Tallaght,Dublin 24,Ireland

* Select a row by double-clicking the Description of Waste then click the delete button